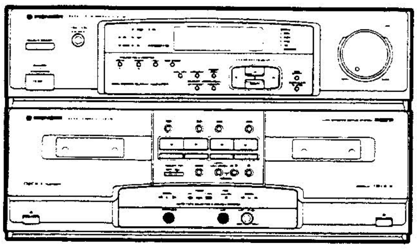
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
ARP2653

DOUBLE DECK AMPLIFIER

DC-J210
DC-J110

DC−J210 AND DC−J110 HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	DC−J210	DC−J110		
SD	○	○*1	AC110V, 120*1−127V, 220V, 240V (Switchable)	*1 120V
SL	—	○	AC110V, 120V, 220V, 240V (Switchable)	
YPW	○	○	AC240V only	

- **This manual is applicable to the following : DC−J210/SD and YPW ; DC−J110/SD, SL and YPW.**
- **For the following : DC−J210/YPW ; DC−J110/SD, SL and YPW, refer to page 59.**
- **These products are systems components.**
  Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component (s), otherwise damage may result.

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DG FEB. 1993 Printed in Japan

1. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

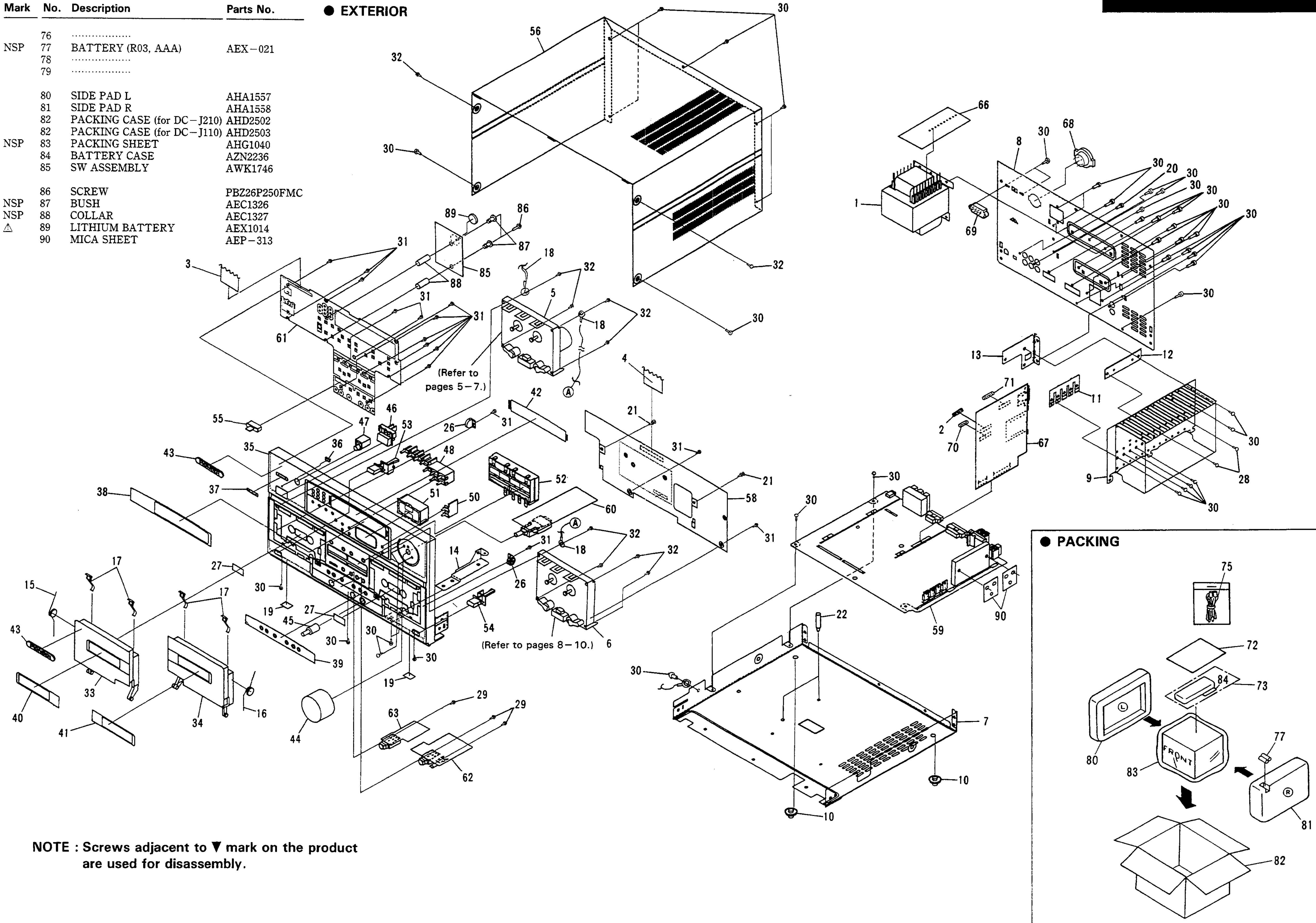
1.1 EXTERIOR AND PACKING

Parts list

Mark	No.	Description	Parts No.
⚠	1	POWER TRANSFORMER (T102 for DC−J210)	ATS1468
⚠	1	POWER TRANSFORMER (T102 for DC−J110)	ATS1470
⚠	2	FUSE (T1.6A/250V, FU1102) (for DC−J210)	AEK−510
⚠	2	FUSE (T800mA/250V, FU1102) (for DC−J110)	AEK−507
⚠NSP	3	FLAT CABLE (J112)	ADD1112
⚠	4	FLAT CABLE (J105)	ADD1116
	5	1 MECHA UNIT	EXK2026
	6	2 MECHA UNIT	EXK2056
	7	CHASSIS (MTL)	ANA1201
	8	REAR PANEL (MTL)	ANC2005
	9	HEAT SINK (AL) (for DC−J210)	ANH1425
	9	HEAT SINK (AL) (for DC−J110)	ANH1408
	10	LEG ASSEMBLY	AEC1049
NSP	11	HOLDER	ANG1561
NSP	12	HOLDER	ANG1600
	13	HEAT SINK HOLDER (MTL)	ANG1777
	14	PCB HOLDER A (MTL)	ANG1778
	15	DOOR SPRING L	ABH1085
	16	DOOR SPRING R	ABH1086
	17	KEEP PLATE	ABK1017
NSP	18	EARTH LEAD	ADB1006
NSP	19	CUSHION	AEB1194
	20	SCREW	ABA−222
	21	NYLON RIVET	AEC1160
NSP	22	PCB SUPORT (H20)	AEC1200
	23	....	
	24	....	
	25	....	
	26	DAMPER ASSEMBLY	AXA1008
	27	SHEET	AAX1301
	28	SCREW (3×18)	ABA1018
	29	SCREW (2.6×8)	ABA1095
	30	SCREW	BBZ30P080FZK
	31	SCREW	BPZ26P080FMC
	32	SCREW	VPZ30P080FZK
	33	CASSETTE DOOR L (PLS)	AAN1365
	34	CASSETTE DOOR R (PLS)	AAN1376
	35	FRONT PANEL (PLS) (for DC−J210)	AMB2092
	35	FRONT PANEL (PLS) (for DC−J110)	AMB2095
	36	LENS (POWER)	AAK2442
	37	FILTER (PLS)	AAK2376
	38	DECORATIVE PLATE (AMP)	AAK2441
	39	DECORATIVE PLATE (DECK)	AAK2398
	40	DECORATIVE PLATE (DOOR L)	AAK2400
	41	DECORATIVE PLATE (DOOR R)	AAK2402
	42	FL FILTER (PVC)	AAK2482
	43	BADGE (ABS)	AAM1047
	44	VOL KNOB	AAB1337
	45	MIC KNOB	AAB1339
	46	POWER BUTTON	AAD2370
	47	FUNCTION BUTTON	AAD2372
	48	BUTTON (GEQ)	AAD2373
	49	....	
	50	AUDITION BUTTON	AAD2375
	51	CURSOR BUTTON	AAD2377
	52	DECK BUTTON	AAD2379
	53	EJECT BUTTON L	AAD2380
	54	EJECT BUTTON R	AAD2381
	55	SLIDE KNOB	AAE1160
	56	BONNET CASE (MTL)	ANE1388
	57	....	
	58	TAPE ASSEMBLY	AWV1318
	59	AF ASSEMBLY (for DC−J210)	AWZ4650
	59	AF ASSEMBLY (for DC−J110)	AWZ4647
	60	VOLUME ASSEMBLY	AWZ4653
	61	DISPLAY ASSEMBLY	AWZ4657
	62	MIC ASSEMBLY	AWZ4663
	63	HEADPHONE ASSEMBLY	AWZ4666
	64	....	
	65	....	
NSP	66	TRANS CONNECT ASSEMBLY	AWZ4672
	67	SUB TRANS ASSEMBLY	AWZ4680
⚠	68	VOLTAGE SELECTOR (S1) [AC110/120−127 (120 for SL) /220/240V]	AKX−507
⚠	69	VOLTAGE SELECTOR (S2) (AC110−127/220−240V)	AKX1004
⚠	70	FUSE (T1.6A/250V, FU1103) (for DC−J210)	AEK−510
⚠	70	FUSE (T800mA/250V, FU1103) (for DC−J110)	AEK−507
⚠	71	FUSE (T2.5A/250V, FU1101)	AEK−512
	72	OPERATING INSTRUCTIONS (English)	ARB1410
	73	REMOTE CONTROL UNIT (CU−DC030)	AXD1337
	74	....	
	75	AC POWER CORD	ADG1129

Mark	No.	Description	Parts No.
	76	....	
NSP	77	BATTERY (R03, AAA)	AEX−021
	78	....	
	79	....	
	80	SIDE PAD L	AHA1557
	81	SIDE PAD R	AHA1558
	82	PACKING CASE (for DC−J210)	AHD2502
	82	PACKING CASE (for DC−J110)	AHD2503
NSP	83	PACKING SHEET	AHG1040
	84	BATTERY CASE	AZN2236
	85	SW ASSEMBLY	AWK1746
	86	SCREW	PBZ26P250FMC
NSP	87	BUSH	AEC1326
NSP	88	COLLAR	AEC1327
⚠	89	LITHIUM BATTERY	AEX1014
	90	MICA SHEET	AEP−313

● EXTERIOR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(Refer to pages 5−7.)
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6
(Refer to pages 8−10.)
22
59
90
7
10

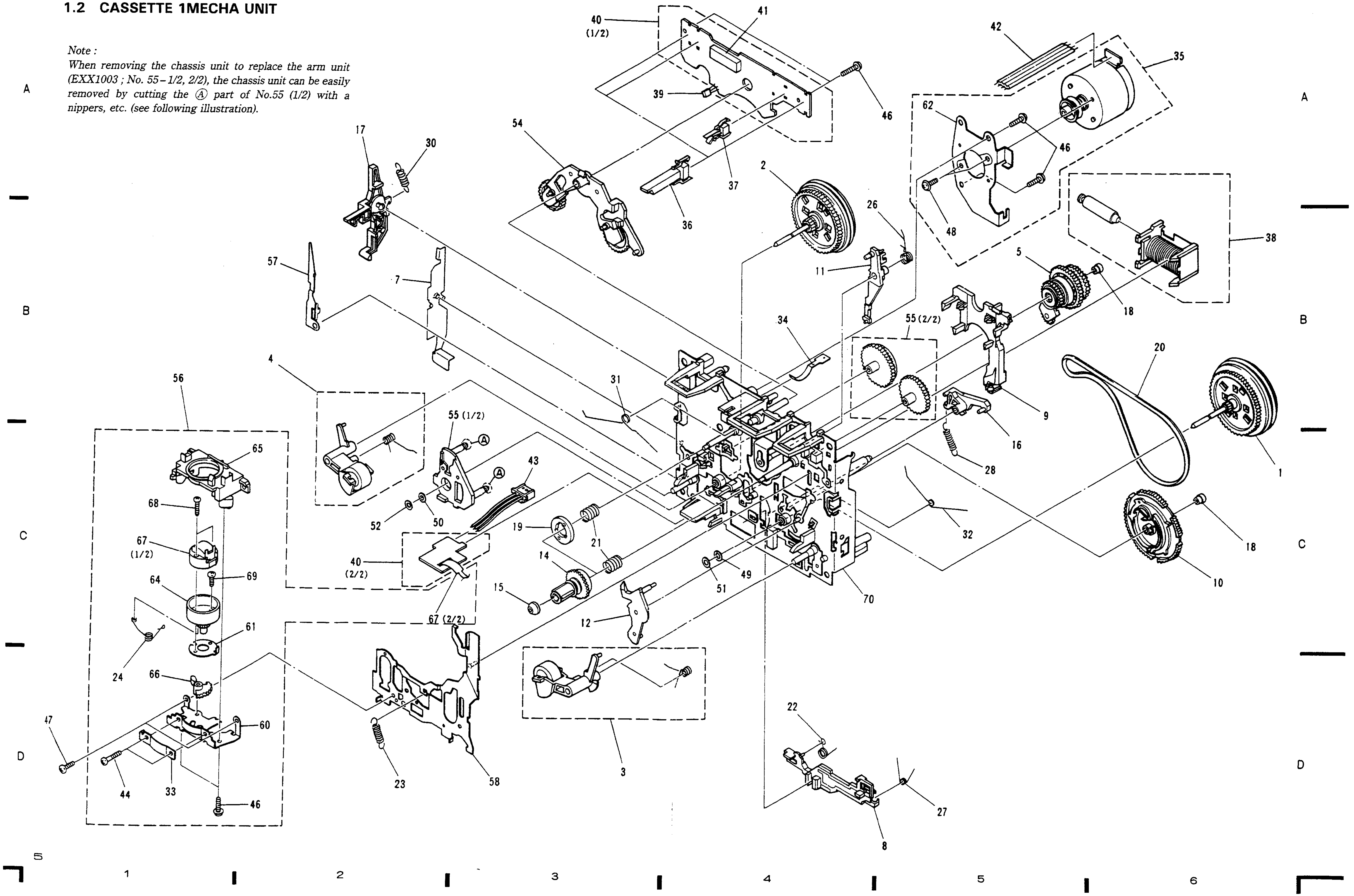
NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

● PACKING

75
72
84
73
77
80
83
FRONT
Ⓛ
Ⓡ
81
82

1.2 CASSETTE 1MECHA UNIT

Note :
When removing the chassis unit to replace the arm unit (EXX1003 ; No. 55 - 1/2, 2/2), the chassis unit can be easily removed by cutting the Ⓐ part of No.55 (1/2) with a nippers, etc. (see following illustration).


2
3
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A
B
C
D
40 (1/2)
41
42
35
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48
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36
57
7
11
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18
34
55 (2/2)
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31
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56
55 (1/2)
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1
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Ⓐ
43
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68
52
50
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21
32
67 (1/2)
18
40 (2/2)
14
21
49
69
64
15
51
10
70
12
67 (2/2)
61
24
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47
60
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3
44
33
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27
8
1
2
3
4
5
6

Parts list

Mark	No.	Description	Parts No.
	1	FLYWHEEL UNIT (FWD)	EXA1222
	2	FLYWHEEL UNIT (RVS)	EXA1223
	3	ROLLER UNIT (FWD)	EXA1224
	4	ROLLER UNIT (RVS)	EXA1225
	5	LIMITER UNIT	EXA1226
	6	....	
	7	EJECT LEVER L2	AZN2063
	8	LEVER	ENV1305
	9	BRAKE	ENV1317
	10	GEAR	ENV1318
	11	LOCK ARM	ENV1159
	12	NR ARM	ENV1163
	13	....	
	14	REEL	ENV1335
	15	REEL BUSH	ENV1338
	16	ARM	ENV1330
	17	EJECT LEVER L1	AZN2108
	18	BUSH	ENV1184
	19	MAGNET	ENV1336
	20	BELT	ENT1023
	21	SPRING	EBH1424
	22	SPRING	EBH1401
	23	SPRING	EBH1203
	24	SPRING	EBH1402
	25	....	
	26	SPRING	EBH1406
	27	SPRING	EBH1407
	28	SPRING	EBH1408
	29	....	
	30	SPRING	EBH1409
	31	SPRING	EBH1410
	32	SPRING	EBH1256
	33	SPRING	EBL1013
	34	SPRING	EBL1014
	35	MOTOR UNIT	EXA1241
	36	SWITCH (Detect)	ESN1009
	37	SWITCH (Mode)	ESN1010
	38	SOLENOID	EXP1005
	39	HALL IC	DN6847SE
	40	COMPLEX PCB	ENX1020
	41	CONNECTOR (10P)	EKS1013
	42	LEAD WIRE (4P)	EDD1003
	43	CONNECTOR (3P)	EDE1009
	44	SCREW (AZIMUTH)	EBA1020
	45	....	
	46	SCREW (M2×8)	ATZ20P080FMC
	47	SCREW	BSZ20P050FMC
	48	SCREW	PMS26P025FUC
	49	WASHER	EBF1008
	50	WASHER	EBF1009
	51	WASHER	EBF1010
	52	WASHER	EBF1011
	53	....	
	54	ARM UNIT	EXX1006
	55	ARM UNIT	EXX1003
	56	P HEAD ASSEMBLY	EXX1008
	57	ARM	ENC1288
	58	HEAD BASE UNIT	EXA1230
	59	....	
NSP	60	BRACKET	ENC1284
NSP	61	PLATE	ENC1285
NSP	62	BRACKET	ENC1199
	63	....	
NSP	64	HOLDER	ENV1161
NSP	65	HOLDER	ENV1301
NSP	66	GEAR	ENV1177
NSP	67	P HEAD UNIT	EXA1110
NSP	68	SCREW	JGZ14P085FNI
NSP	69	SCREW	JGZ14P040FNI
NSP	70	CHASSIS UNIT	....

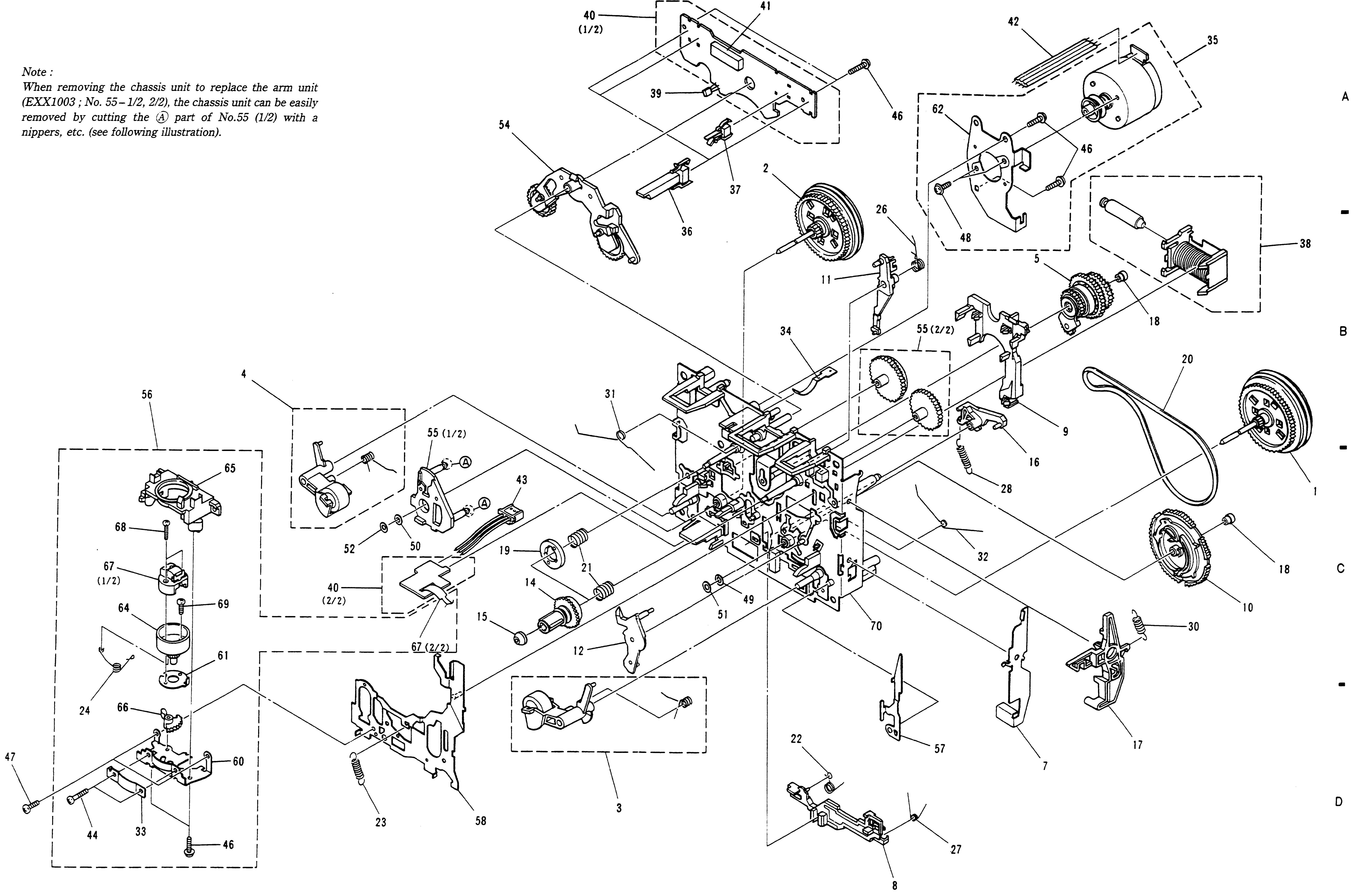
1.3 CASSETTE 2 MECHA UNIT

Parts list

Mark	No.	Description	Parts No.
	1	FLYWHEEL UNIT (FWD)	EXA1222
	2	FLYWHEEL UNIT (RVS)	EXA1223
	3	ROLLER UNIT (FWD)	EXA1224
	4	ROLLER UNIT (RVS)	EXA1225
	5	LIMITER UNIT	EXA1226
	6	....	
	7	EJECT LEVER R2	AZN2064
	8	NR LEVER	ENV1305
	9	BRAKE	ENV1317
	10	CAM GEAR	ENV1318
	11	LOCK ARM	ENV1159
	12	NR ARM	ENV1163
	13	....	
	14	REEL	ENV1335
	15	REEL BUSH	ENV1338
	16	ARM	ENV1330
	17	EJECT LEVER R1	AZN2109
	18	BUSH	ENV1184
	19	MAGNET	ENV1336
	20	BELT	ENT1023
	21	SPRING	EBH1424
	22	SPRING	EBH1401
	23	SPRING	EBH1203
	24	SPRING	EBH1402
	25	....	
	26	SPRING	EBH1406
	27	SPRING	EBH1407
	28	SPRING	EBH1408
	29	....	
	30	SPRING	EBH1409
	31	SPRING	EBH1410
	32	SPRING	EBH1256
	33	SPRING	EBL1013
	34	SPRING	EBL1014
	35	MOTOR UNIT	EXA1241
	36	SWITCH (Detect)	ESN1009
	37	SWITCH (Mode)	ESN1010
	38	SOLENOID	EXP1005
	39	HALL IC	DN6847SE
	40	SUB COMPLEX PCB	ENX1019
	41	CONNECTOR (15P)	EKS1012
	42	LEAD WIRE (4P)	EDD1003
	43	CONNECTOR (5P)	EDE1008
	44	SCREW (AZIMUTH)	EBA1020
	45	....	

Mark	No.	Description	Parts No.
	46	SCREW (M2×8)	ATZ20P080FMC
	47	SCREW	BSZ20P050FMC
	48	SCREW	PMS26P025FUC
	49	WASHER	EBF1008
	50	WASHER	EBF1009
	51	WASHER	EBF1010
	52	WASHER	EBF1011
	53	....	
	54	ARM UNIT	EXX1006
	55	ARM UNIT	EXX1003
	56	R/P HEAD ASSEMBLY	EXX1013
	57	ARM	ENC1289
	58	HEAD BASE UNIT	EXA1230
	59	....	
NSP	60	BRACKET	ENC1284
NSP	61	PLATE	ENC1285
NSP	62	BRACKET	ENC1289
	63	....	
NSP	64	HOLDER	ENV1161
NSP	65	HOLDER	ENV1301
NSP	66	GEAR	ENV1177
NSP	67	R/P HEAD UNIT	EXA1234
NSP	68	SCREW	JGZ14P085FNI
NSP	69	SCREW	JGZ14P040FNI
NSP	70	CHASSIS UNIT	....

Note :
When removing the chassis unit to replace the arm unit (EXX1003 ; No. 55 – 1/2, 2/2), the chassis unit can be easily removed by cutting the Ⓐ part of No.55 (1/2) with a nippers, etc. (see following illustration).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55 (2/2)
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55 (1/2)
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(1/2)
69
64
61
24
66
60
47
44
33
46
52
50
19
21
40
(2/2)
14
15
67 (2/2)
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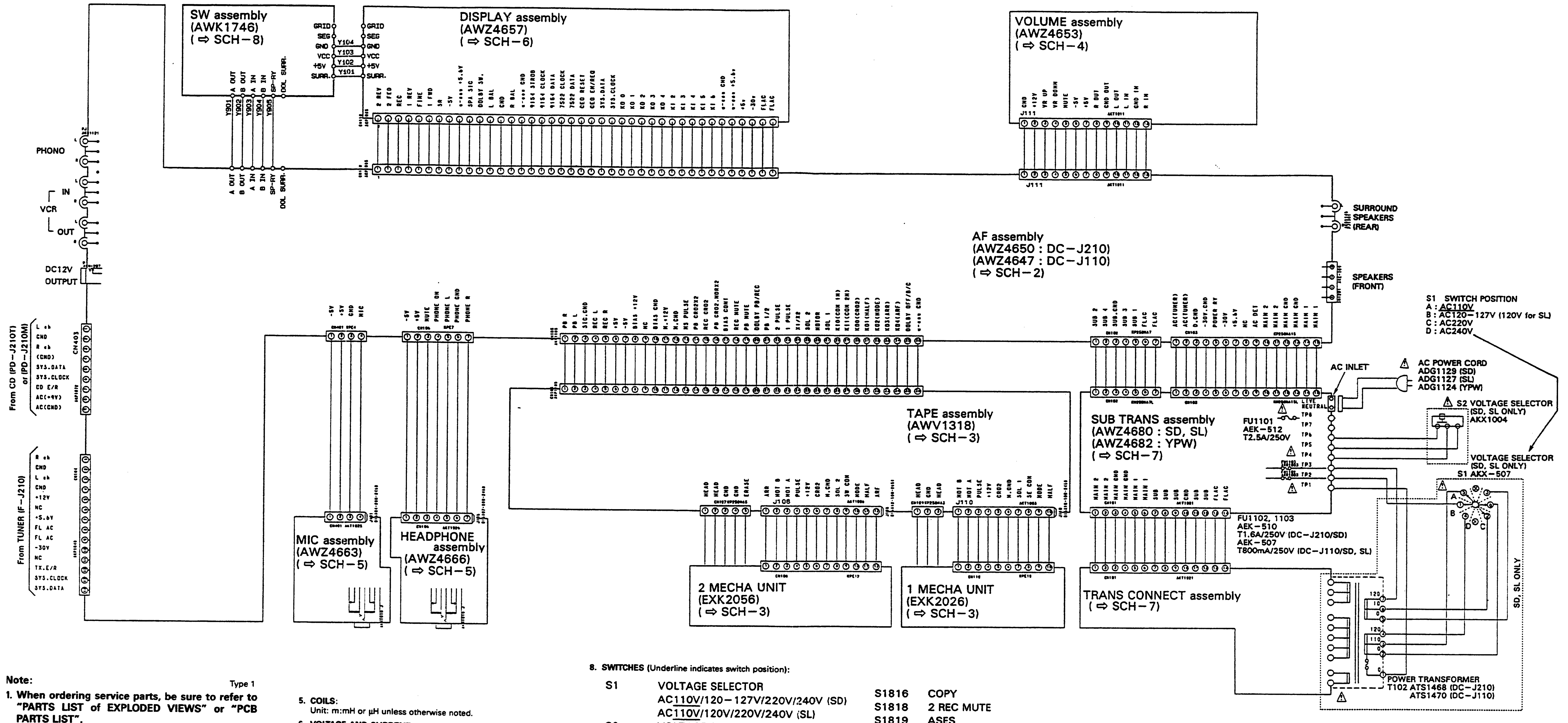
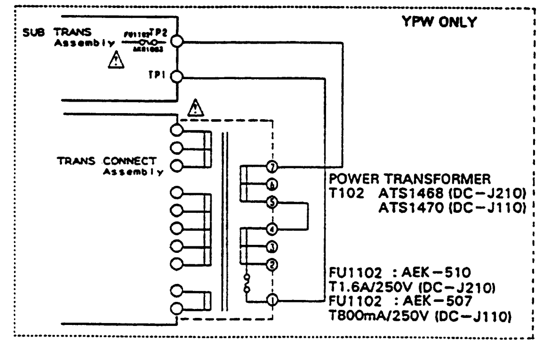
58

2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 OVERALL SCHEMATIC DIAGRAM


SW assembly
(AWK1746)
(⇨ SCH−8)
GRID
SEG
GND
VCC
+5V
SURR.
Y104
Y103
Y102
Y101
A OUT
B OUT
A IN
B IN
SP-RY
DOL SURR.
Y901
Y902
Y903
Y904
Y905
DISPLAY assembly
(AWZ4657)
(⇨ SCH−6)
2 REV
2 FED
REC
1 REV
VOLUME assembly
(AWZ4653)
(⇨ SCH−4)
J111
PHONO
L
R
VCR
IN
OUT
DC12V
OUTPUT
From CD (PD−J210T) or (PD−J210M)
CN403
L ch
GND
R ch
(GND)
SYS.DATA
SYS.CLOCK
CD E/R
AC(+9V)
AC(GND)
From TUNER (F−J210)
R ch
GND
L ch
GND
+12V
NC
+5.6V
FL AC
FL AC
-30V
NC
TX.E/R
SYS.CLOCK
SYS.DATA
-5V
+5V
GND
MIC
MIC assembly
(AWZ4663)
(⇨ SCH−5)
HEADPHONE assembly
(AWZ4666)
(⇨ SCH−5)
AF assembly
(AWZ4650 : DC−J210)
(AWZ4647 : DC−J110)
(⇨ SCH−2)
TAPE assembly
(AWV1318)
(⇨ SCH−3)
2 MECHA UNIT
(EXK2056)
(⇨ SCH−3)
1 MECHA UNIT
(EXK2026)
(⇨ SCH−3)
SUB TRANS assembly
(AWZ4680 : SD, SL)
(AWZ4682 : YPW)
(⇨ SCH−7)
TRANS CONNECT assembly
(⇨ SCH−7)
SURROUND SPEAKERS (REAR)
SPEAKERS (FRONT)
S1 SWITCH POSITION
A : AC110V
B : AC120−127V (120V for SL)
C : AC220V
D : AC240V
AC INLET
AC POWER CORD
ADG1129 (SD)
ADG1127 (SL)
ADG1124 (YPW)
LIVE
NEUTRAL
S2 VOLTAGE SELECTOR
(SD, SL ONLY)
AKX1004
FU1101
AEK−512
T2.5A/250V
TP8
TP7
TP6
TP5
TP4
TP3
TP2
TP1
VOLTAGE SELECTOR
(SD, SL ONLY)
S1 AKX−507
A
B
C
D
FU1102, 1103
AEK−510
T1.6A/250V (DC−J210/SD)
AEK−507
T800mA/250V (DC−J110/SD, SL)
SD, SL ONLY
120
10
0
120
110
0
0
POWER TRANSFORMER
T102 ATS1468 (DC−J210)
ATS1470 (DC−J110)


YPW ONLY
SUB TRANS Assembly
TP2
TP1
TRANS CONNECT Assembly
POWER TRANSFORMER
T102 ATS1468 (DC−J210)
ATS1470 (DC−J110)
FU1102 : AEK−510
T1.6A/250V (DC−J210)
FU1102 : AEK−507
T800mA/250V (DC−J110)

Note: Type 1

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭V : Signal voltage at rated output.
   ← V : DC voltage (V) at no input signal unless otherwise noted. Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA : DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ➡ : Signal route.
   - ⊘ : Adjusting point.
   - ▼ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SWITCHES** (Underline indicates switch position):

S1	VOLTAGE SELECTOR AC110V/120−127V/220V/240V (SD) AC110V/120V/220V/240V (SL)
S2	VOLTAGE SELECTOR AC110−127V/220−240V

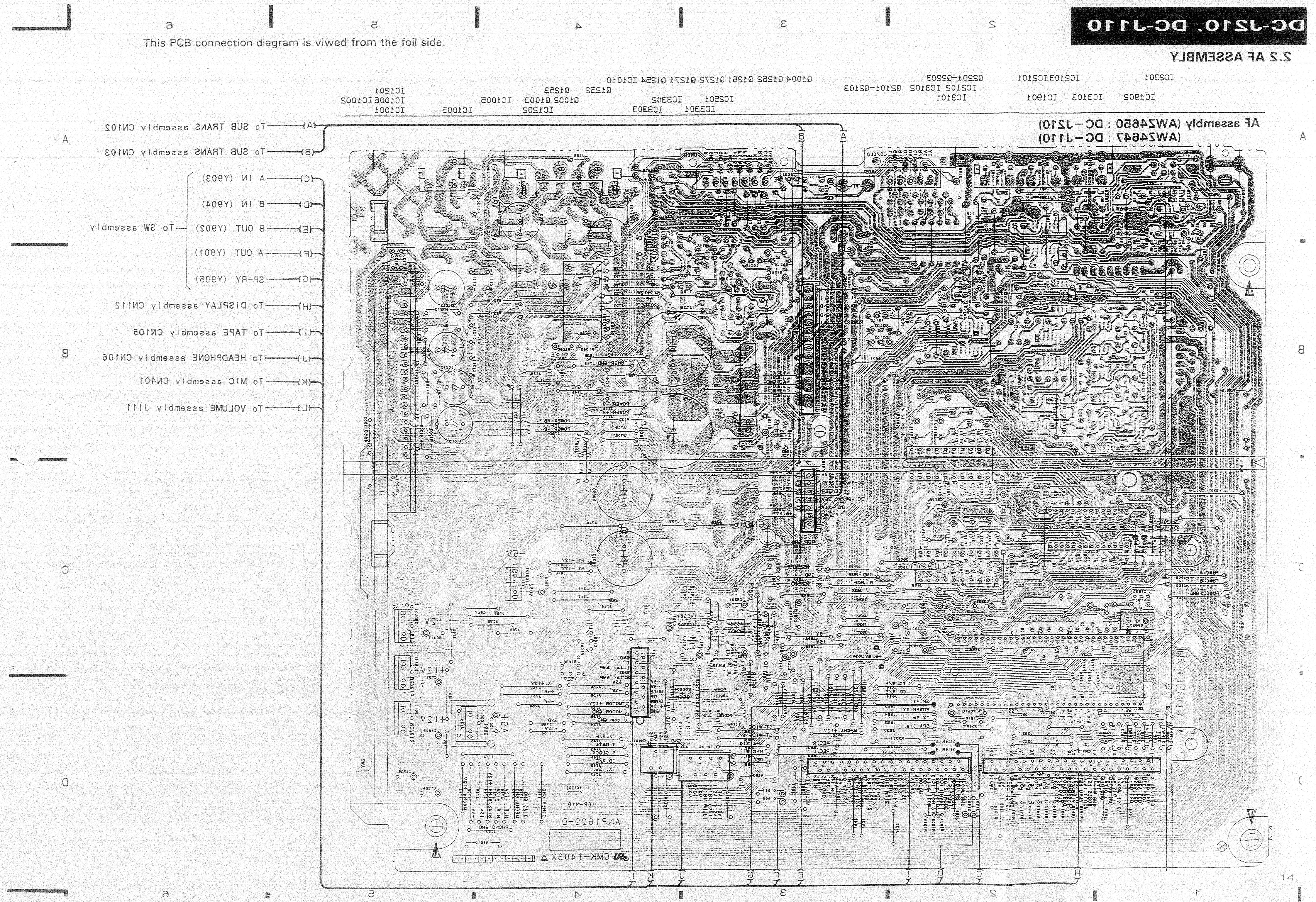
DISPLAY assembly

S1801	SMART OPERATION START/SET (AI BGM)
S1802	FUNCTION (DEMO)
S1804	SMART OPERATION MEMORY (AI MEMORY)
S1805	POWER
S1806	1 REV
S1807	1 PLAY
S1808	1 STOP
S1809	2 REW
S1810	2 FF
S1811	1 REW
S1812	1 FF
S1813	2 STOP
S1814	2 REV
S1815	2 PLAY
S1816	COPY
S1818	2 REC MUTE
S1819	ASES
S1820	2 REC PAUSE
S1901	DOLBY NR ON/OFF
S3801	GEQ FREQ UP
S3802	GEQ LEVEL DOWN
S3806	SURROUND & WIDE
S3807	GEQ LEVEL UP
S3808	GEQ FREQ DOWN
S3809	GEQ MODE
S3810	PRESET/PGM
S3811	GEQ ON/OFF
S3813	SFC MOVIE/A (SFC : SOUND FIELD CONTROL)
S3814	SFC DISCO/B
S3815	SFC HALL/C
S3816	SFC MEMO
S3817	SFC OFF

9. **For SCH−☐ on the schematic diagram**
   - SCH−☐ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

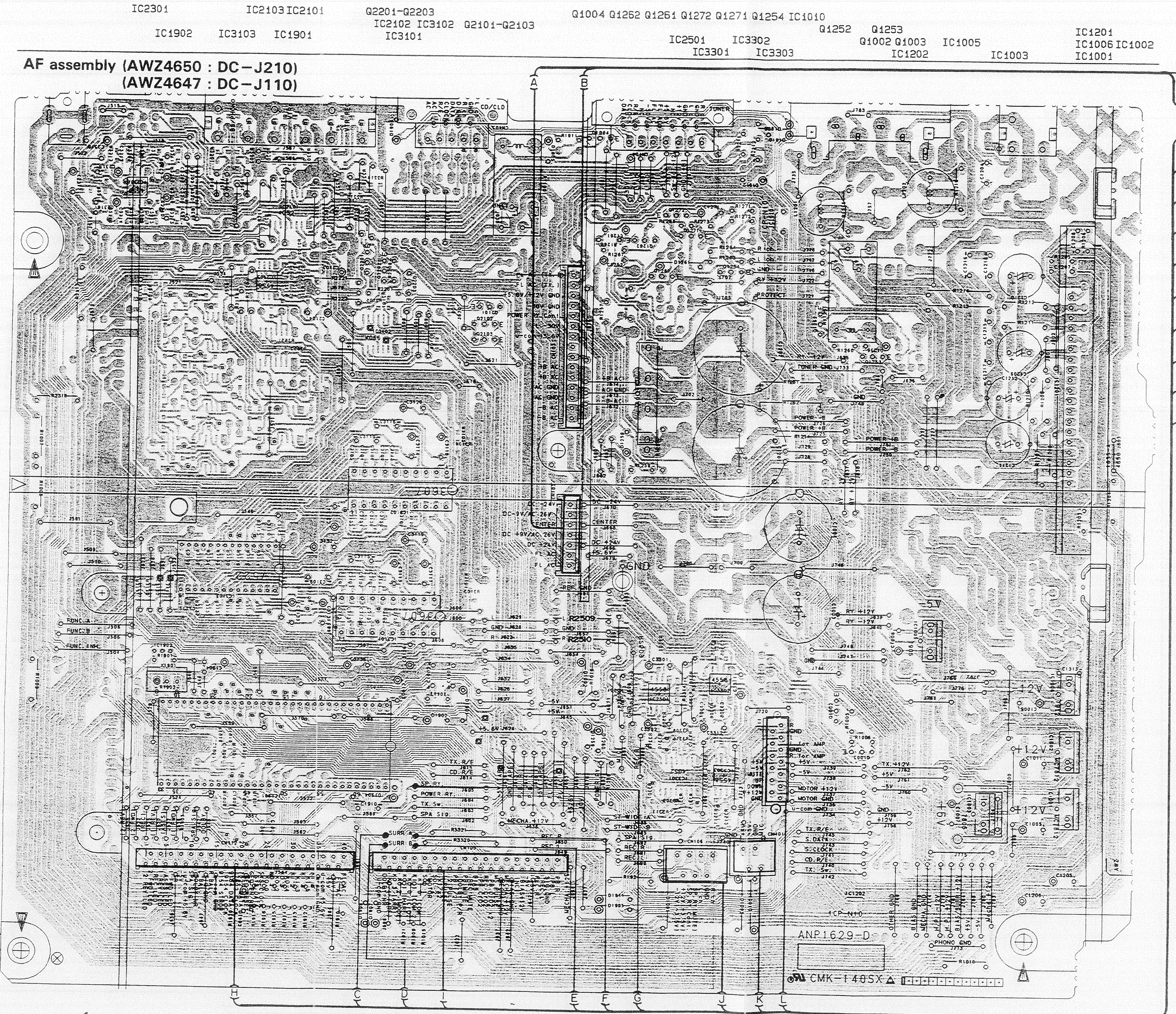
2.2 AF ASSEMBLY

This PCB connection diagram is viwed from the foil side.


AF assembly (AWZ4650 : DC-J210)
(AWZ4647 : DC-J110)
IC2301
IC2101 IC2103
Q2201–Q2203
IC2105 IC3105 Q2101–Q2103
IC3101
IC1902 IC3103 IC1901
IC1010 Q1254 Q1271 Q1272 Q1261 Q1265 Q4004
Q1252
Q1253
Q1003 Q1005
IC1202
IC2501
IC3301
IC3302
IC3303
IC1005
IC1003
IC1201
IC1002 IC1006
IC1001
To SUB TRANS assembly CN102 (A)
To SUB TRANS assembly CN103 (B)
A IN (Y903) (C)
B IN (Y904) (D)
B OUT (Y902) (E)
A OUT (Y901) (F)
SP-RY (Y905) (G)
To SW assembly
To DISPLAY assembly CN112 (H)
To TAPE assembly CN105 (I)
To HEADPHONE assembly CN106 (J)
To MIC assembly CN401 (K)
To VOLUME assembly J111 (L)
ANP1629-D
CMK-1405X
A
B
C
D
1
2
3
4
5
6

2.2 AF ASSEMBLY

This PCB connection diagram is viewd from the parts mounted side.


IC2301
IC1902
IC3103
IC2103 IC2101
IC1901
Q2201–Q2203
IC2102 IC3102 Q2101–Q2103
IC3101
Q1004 Q1252 Q1251 Q1272 Q1271 Q1254 IC1010
IC2501 IC3302
IC3301 IC3303
Q1252 Q1253
Q1002 Q1003 IC1005
IC1202
IC1003
IC1201
IC1006 IC1002
IC1001
AF assembly (AWZ4650 : DC−J210)
(AWZ4647 : DC−J110)
A
B
C
D
E
F
G
H
J
K
L
ANP1629-D
CMK-140SX

(A) To SUB TRANS assembly CN102

(B) To SUB TRANS assembly CN103

(C) A IN (Y903)

(D) B IN (Y904)

(E) B OUT (Y902) — To SW assembly

(F) A OUT (Y901)

(G) SP−RY (Y905)

(H) To DISPLAY assembly CN112

(I) To TAPE assembly CN105

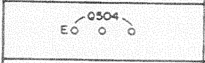
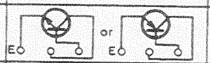
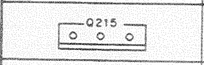
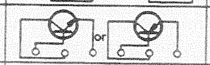
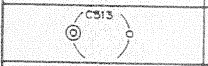
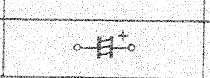
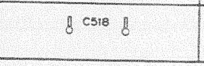
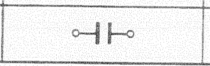
(J) To HEADPHONE assembly CN106

(K) To MIC assembly CN401

(L) To VOLUME assembly J111

NOTE

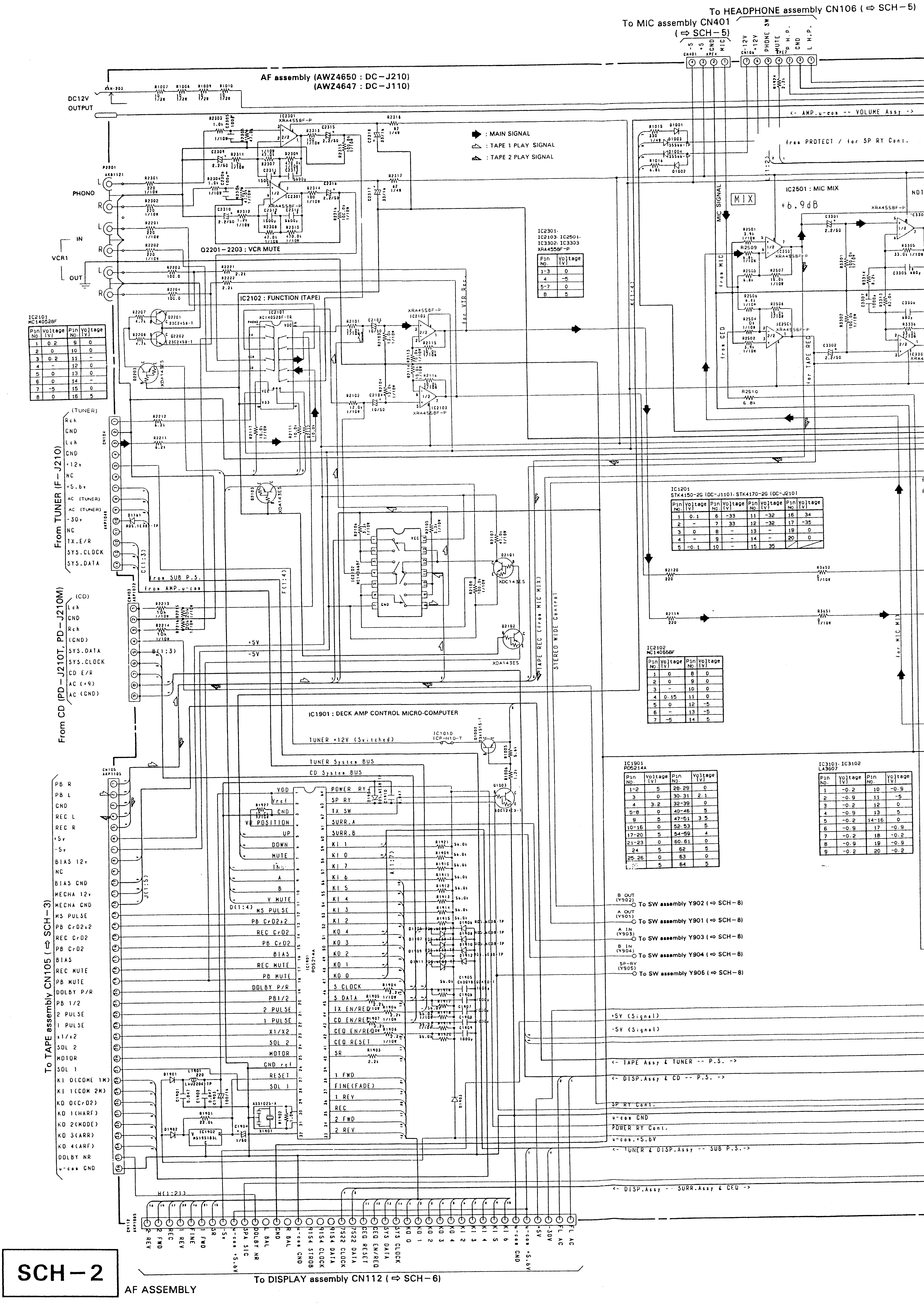
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarized)
		Capacitor (Non-polarized)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎(double circles) shows negatine terminal.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


AF assembly (AWZ4650 : DC−J210)
(AWZ4647 : DC−J110)
To HEADPHONE assembly CN106 (⇨ SCH−5)
To MIC assembly CN401
(⇨ SCH−5)
DC12V
OUTPUT
PHONO
VCR1
IN
OUT
: MAIN SIGNAL
: TAPE 1 PLAY SIGNAL
: TAPE 2 PLAY SIGNAL
Q2201 − 2203 : VCR MUTE
IC2102 : FUNCTION (TAPE)
IC2501 : MIC MIX
+6.9dB
MIX
MIC SIGNAL
From TUNER (F−J210)
From CD (PD−J210T, PD−J210M)
To TAPE assembly CN105 (⇨ SCH−3)
IC1901 : DECK AMP CONTROL MICRO-COMPUTER
TUNER +12V (Switched)
TUNER System BUS
CD System BUS
To SW assembly Y902 (⇨ SCH−8)
To SW assembly Y901 (⇨ SCH−8)
To SW assembly Y903 (⇨ SCH−8)
To SW assembly Y904 (⇨ SCH−8)
To SW assembly Y905 (⇨ SCH−8)
To DISPLAY assembly CN112 (⇨ SCH−6)

IC2101
MC140528F

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.2	9	0
2	0	10	0
3	0.2	11	−
4	−	12	0
5	0	13	0
6	0	14	−
7	−5	15	0
8	0	16	5

IC2301, IC2103, IC2501, IC3302, IC3303
XRA4558F−P

Pin No.	Voltage (V)
1−3	0
4	−5
5−7	0
8	5

IC1201
STK4150−2G (DC−J110), STK4170−2G (DC−J210)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.1	6	−33	11	−32	16	34
2	−	7	33	12	−32	17	−35
3	0	8	−	13	−	19	0
4	−	9	−	14	−	20	0
5	−0.1	10	−	15	35		

IC2102
MC14066BF

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	8	0
2	0	9	0
3	−	10	0
4	0.15	11	0
5	0	12	−5
6	−	13	−5
7	−5	14	5

IC1901
PD5214A

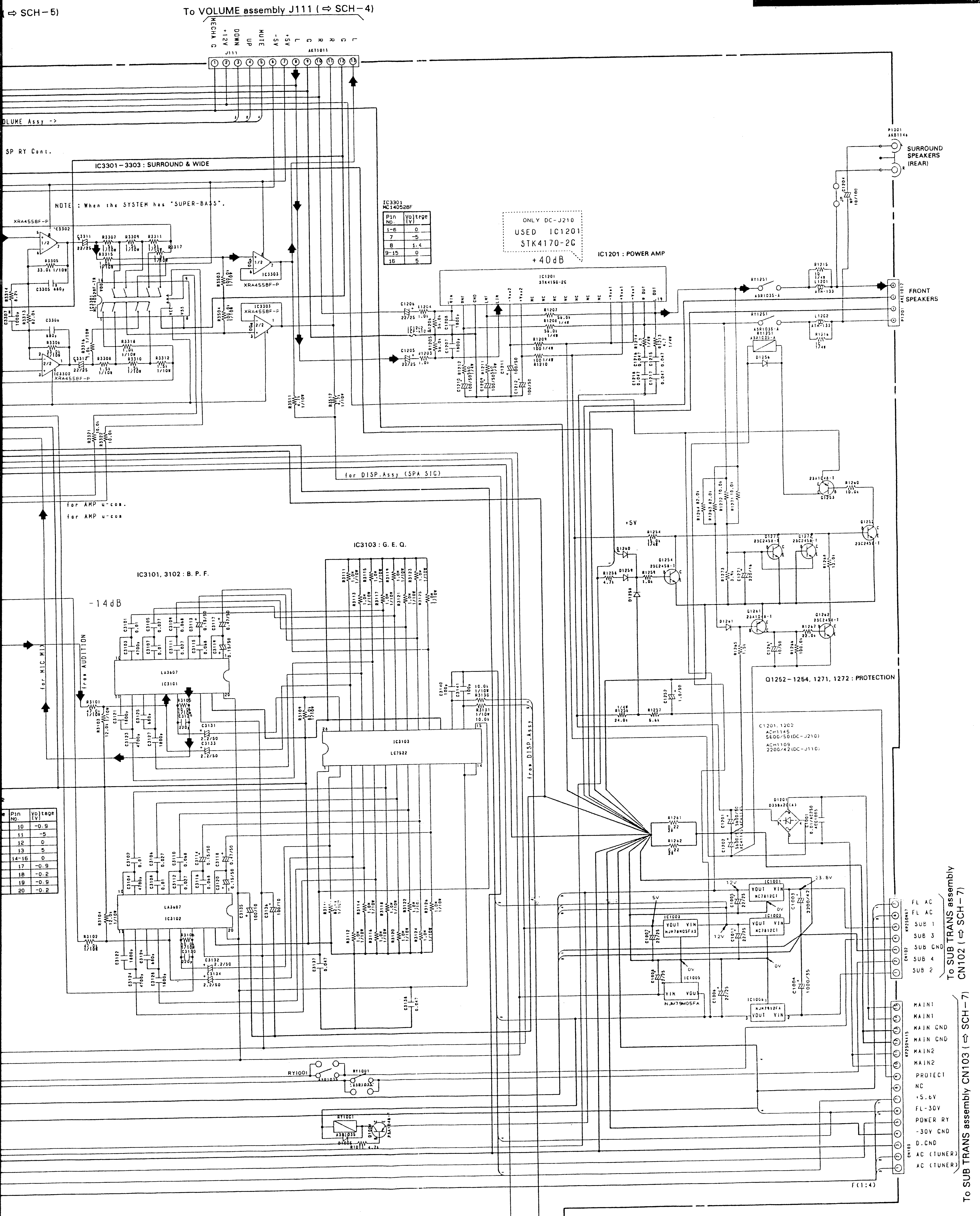
Pin No.	Voltage (V)	Pin No.	Voltage (V)
1−2	5	28, 29	0
3	0	30, 31	2.1
4	3.2	32−39	0
5−8	0	40−46	5
9	5	47−51	3.5
10−16	0	52, 53	5
17−20	5	54−59	4
21−23	0	60, 61	0
24	5	62	5
25, 26	0	63	0
[illegible]	5	64	5

IC3101, IC3102
LA3607

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	−0.2	10	−0.9
2	−0.9	11	−5
3	−0.2	12	0
4	−0.9	13	5
5	−0.2	14−16	0
6	−0.9	17	−0.9
7	−0.2	18	−0.2
8	−0.9	19	−0.9
9	−0.2	20	−0.2

SCH−2

AF ASSEMBLY


(⇨ SCH−5)
To VOLUME assembly J111 (⇨ SCH−4)
MECHA G
+12V
DOWN
UP
MUTE
−5V
+5V
L
G
R
R
G
L
J111
AKT1011
OLUME Assy ->
SP RY Cont.
IC3301−3303 : SURROUND & WIDE
NOTE : When the SYSTEM has "SUPER-BASS".
XRA4558F-P
IC3302
IC3303
ONLY DC-J210
USED IC1201
STK4170-2C
+40dB
IC1201 : POWER AMP
IC1201
STK4150-2C
P1301
AKB1146
SURROUND
SPEAKERS
(REAR)
FRONT
SPEAKERS
P1701
AKE1012
for DISP.Assy (SPA SIG)
for AMP u-com.
for AMP u-com
+5V
IC3103 : G. E. Q.
IC3101, 3102 : B. P. F.
−14dB
for MIC MIX
from AUDITION
LA3607
IC3101
IC3102
IC3103
LC7522
from DISP.Assy
Q1252−1254, 1271, 1272 : PROTECTION
C1201, 1202
ACH1145
5600/50(DC−J210)
ACH1109
2200/42(DC−J110)
D1201
D3SBA20(A)
IC1001
NC7812C1
IC1002
NC7812C1
IC1003
NJM78M05FA
IC1005
NJM79M05FA
IC1004
NJM7912FA
12V
5V
23.8V
0V
RY1001
ASR1035
FL AC
FL AC
SUB 1
SUB 3
SUB GND
SUB 4
SUB 2
CN102
KP250NA7
To SUB TRANS assembly CN102 (⇧ SCH−7)
MAIN1
MAIN1
MAIN GND
MAIN GND
MAIN2
MAIN2
PROTECT
NC
+5.6V
FL-30V
POWER RY
-30V GND
D.GND
AC (TUNER)
AC (TUNER)
CN103
KP250NA15
To SUB TRANS assembly CN103 (⇧ SCH−7)
F(1:4)
A
B
C
D
E
F

IC3301
MC140528F

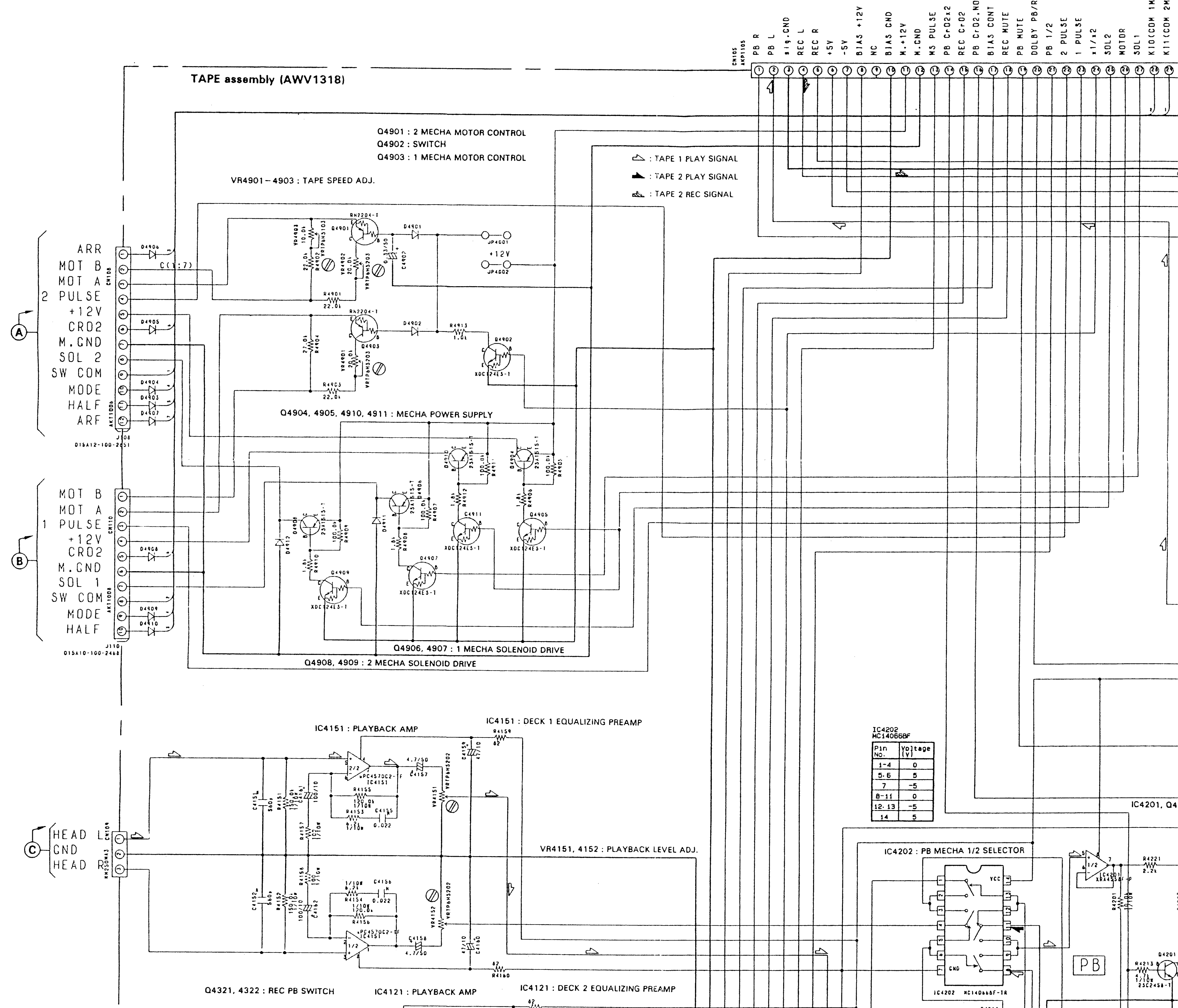
Pin No.	Voltage (V)
1−6	0
7	−5
8	1.4
9−15	0
16	5

Pin No.	Voltage (V)
10	−0.9
11	−5
12	0
13	5
14−16	0
17	−0.9
18	−0.2
19	−0.9
20	−0.2

AF ASSEMBLY

SCH−2

2.3 TAPE ASSEMBLY, 1 MECHA UNIT AND 2 MECHA UNIT


To AF assembly CN105 (⇨ SCH-2)
CN105 AKP1105
PB R
PB L
Sig.GND
REC L
REC R
+5V
-5V
BIAS +12V
NC
BIAS GND
M.+12V
M.GND
MS PULSE
PB CrO2x2
REC CrO2
PB CrO2.NORx2
BIAS CONT
REC MUTE
PB MUTE
DOLBY PB/REC
PB 1/2
2 PULSE
1 PULSE
x1/x2
SOL2
MOTOR
SOL1
K10(COM 1M)
K11(COM 2M)
TAPE assembly (AWV1318)
Q4901 : 2 MECHA MOTOR CONTROL
Q4902 : SWITCH
Q4903 : 1 MECHA MOTOR CONTROL
VR4901 – 4903 : TAPE SPEED ADJ.
: TAPE 1 PLAY SIGNAL
: TAPE 2 PLAY SIGNAL
: TAPE 2 REC SIGNAL
ARR
MOT B
MOT A
2 PULSE
+12V
CRO2
M.GND
SOL 2
SW COM
MODE
HALF
ARF
CN108
J108
D15A12-100-2451
A
MOT B
MOT A
1 PULSE
+12V
CRO2
M.GND
SOL 1
SW COM
MODE
HALF
CN110
J110
D15A10-100-2468
B
JP4001
+12V
JP4002
Q4904, 4905, 4910, 4911 : MECHA POWER SUPPLY
Q4906, 4907 : 1 MECHA SOLENOID DRIVE
Q4908, 4909 : 2 MECHA SOLENOID DRIVE
IC4151 : PLAYBACK AMP
IC4151 : DECK 1 EQUALIZING PREAMP
VR4151, 4152 : PLAYBACK LEVEL ADJ.
HEAD L
GND
HEAD R
C
CN109
Q4321, 4322 : REC PB SWITCH
IC4121 : PLAYBACK AMP
IC4121 : DECK 2 EQUALIZING PREAMP
VR4121, 4122 : PLAYBACK LEVEL ADJ.
HEAD R
HEAD L
GND
GND
ERASE
D
CN107
IC4202 MC14066BF
IC4202 : PB MECHA 1/2 SELECTOR
PB
Q4208, 4209 : CONTROL
IC4201, Q4
VR4351, 4352 : Adjustment of frequency characteristics of RECORDING/PLAYBACK
Q4351, 4352 : CrO2/NORM. SWITCHING
Q4353, 4354 : BIAS OSC
T4351 : Adjustment of BIAS OSCILLATION FREQUENCY
Q4355 : BIAS OSCILLATION ON/OFF
M

IC4202
MC14066BF

Pin No.	Voltage (V)
1-4	0
5.6	5
7	-5
8-11	0
12.13	-5
14	5

IC4121, IC4151
UPC4570G2

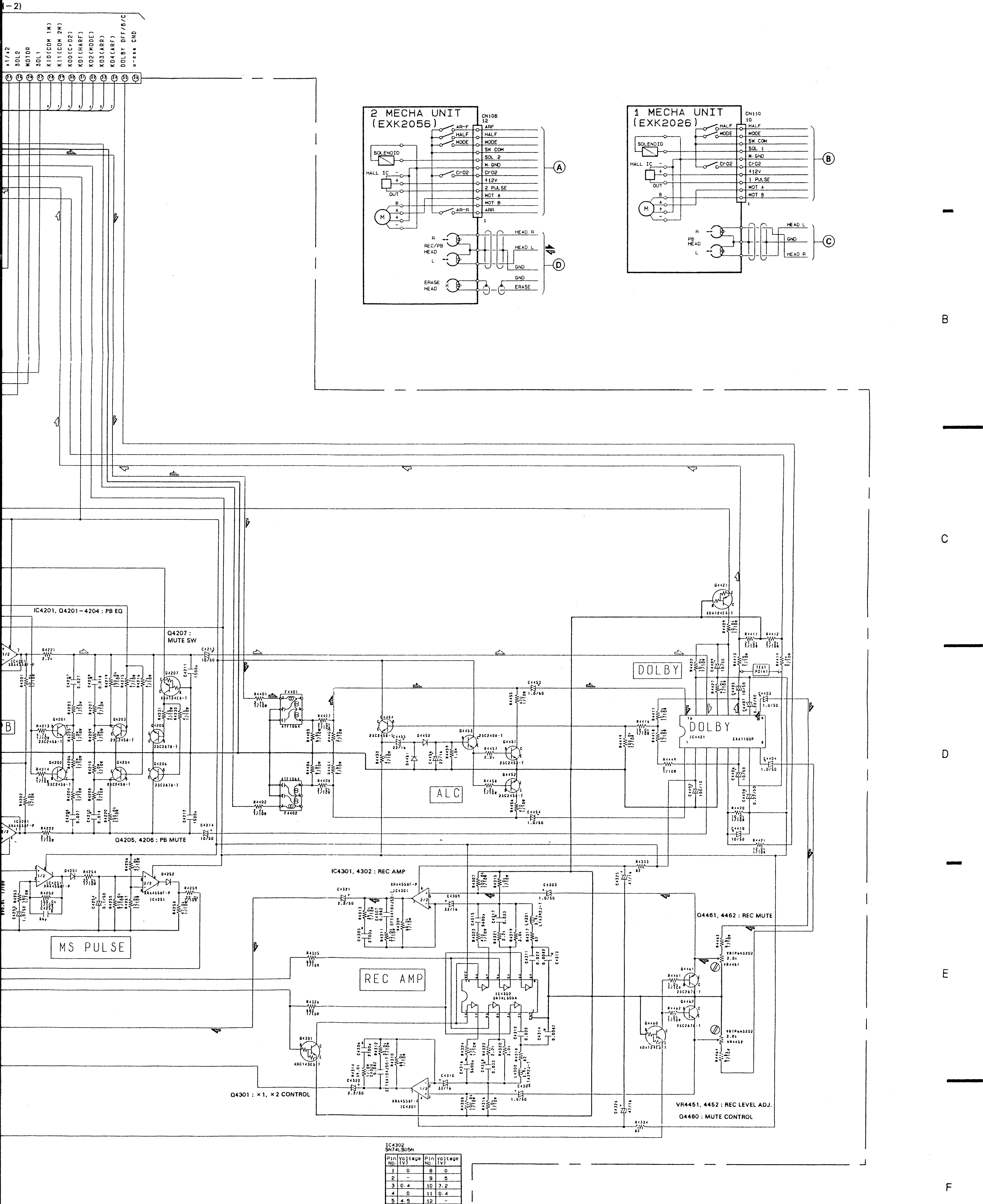
Pin No.	Voltage (V)
1-3	0
4	-5
5-7	0
8	5

IC4201, IC4251, IC4301
XRA4558F-P

Pin No.	Voltage (V)
1-3	0
4	-5
5-7	0
8	5

SCH-3

TAPE ASSEMBLY,
1 MECHA UNIT,
2 MECHA UNIT


-2)
x1/x2
SOL2
MOTOR
SOL1
K10(COM 1M)
K11(COM 2M)
K00(CrO2)
K01(HARF)
K02(MODE)
K03(ARR)
K04(ARF)
DOLBY OFF/B/C
u-com GND
24 25 26 27 28 29 30 31 32 33 34 35 36
2 MECHA UNIT
(EXK2056)
CN108
12
AR-F
HALF
MODE
SOLENOID
HALL IC
OUT
M
Cr02
AR-R
ARF
HALF
MODE
SW COM
SOL 2
M. GND
Cr02
+12V
2 PULSE
MOT A
MOT B
ARR
1
A
R
REC/PB HEAD
L
HEAD R
HEAD L
GND
D
ERASE HEAD
GND
ERASE
1 MECHA UNIT
(EXK2026)
CN110
10
HALF
MODE
SW COM
SOL 1
M. GND
Cr02
+12V
1 PULSE
MOT A
MOT B
B
PB HEAD
HEAD L
GND
HEAD R
C
B
C
D
E
F
IC4201, Q4201-4204 : PB EQ
Q4207 : MUTE SW
Q4205, 4206 : PB MUTE
MS PULSE
ALC
DOLBY
DOLBY
IC4421
CXA1100P
TEST POINT
Q4421
IC4301, 4302 : REC AMP
REC AMP
IC4302
SN74LS06N
Q4301 : ×1, ×2 CONTROL
Q4461, 4462 : REC MUTE
VR4451, 4452 : REC LEVEL ADJ.
Q4460 : MUTE CONTROL
VR4451
VR4452

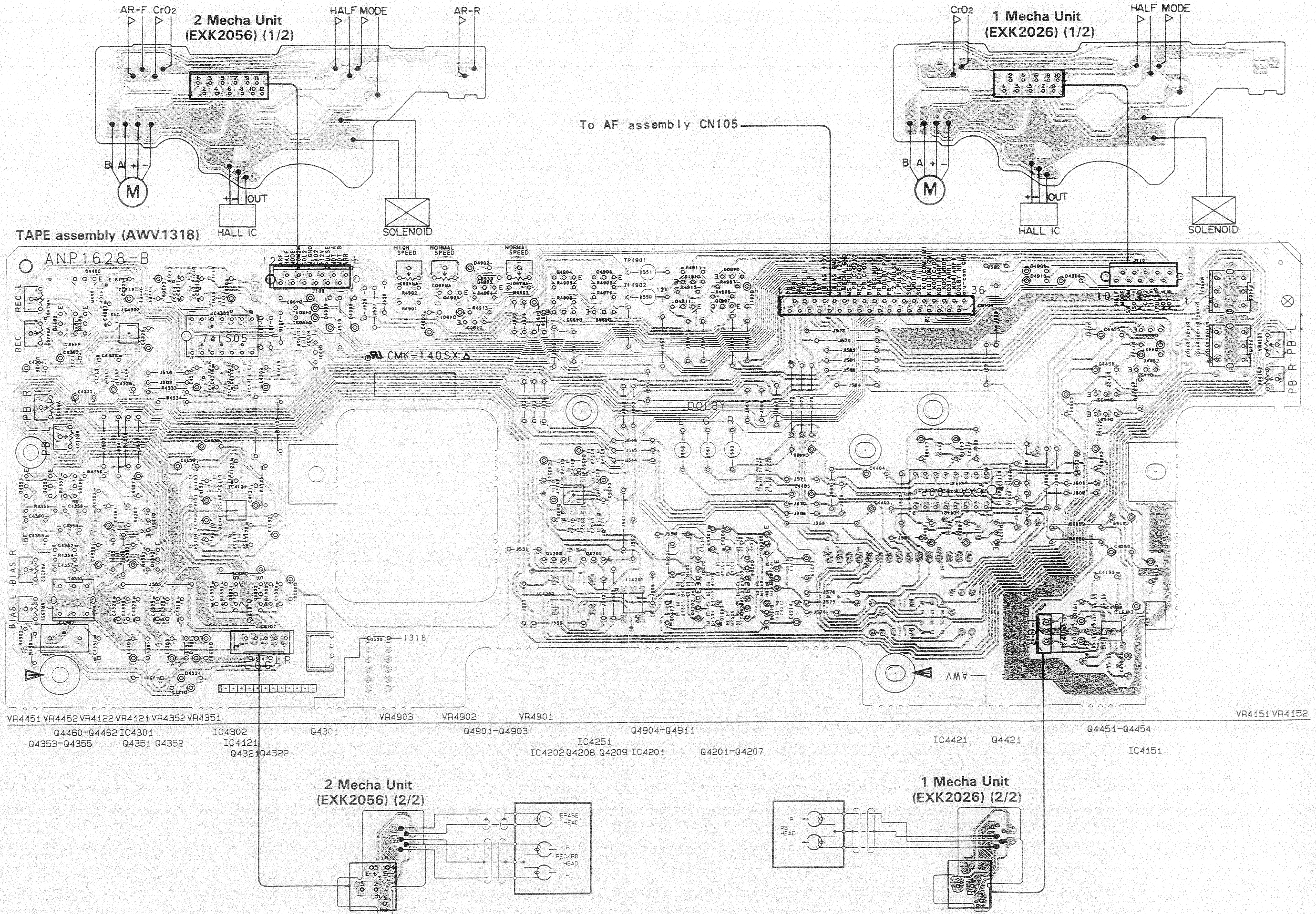
IC4302
SN74LS05N

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	8	0
2	-	9	5
3	0.4	10	7.2
4	0	11	0.4
5	4.5	12	-
6	0	13	0
7	0	14	5

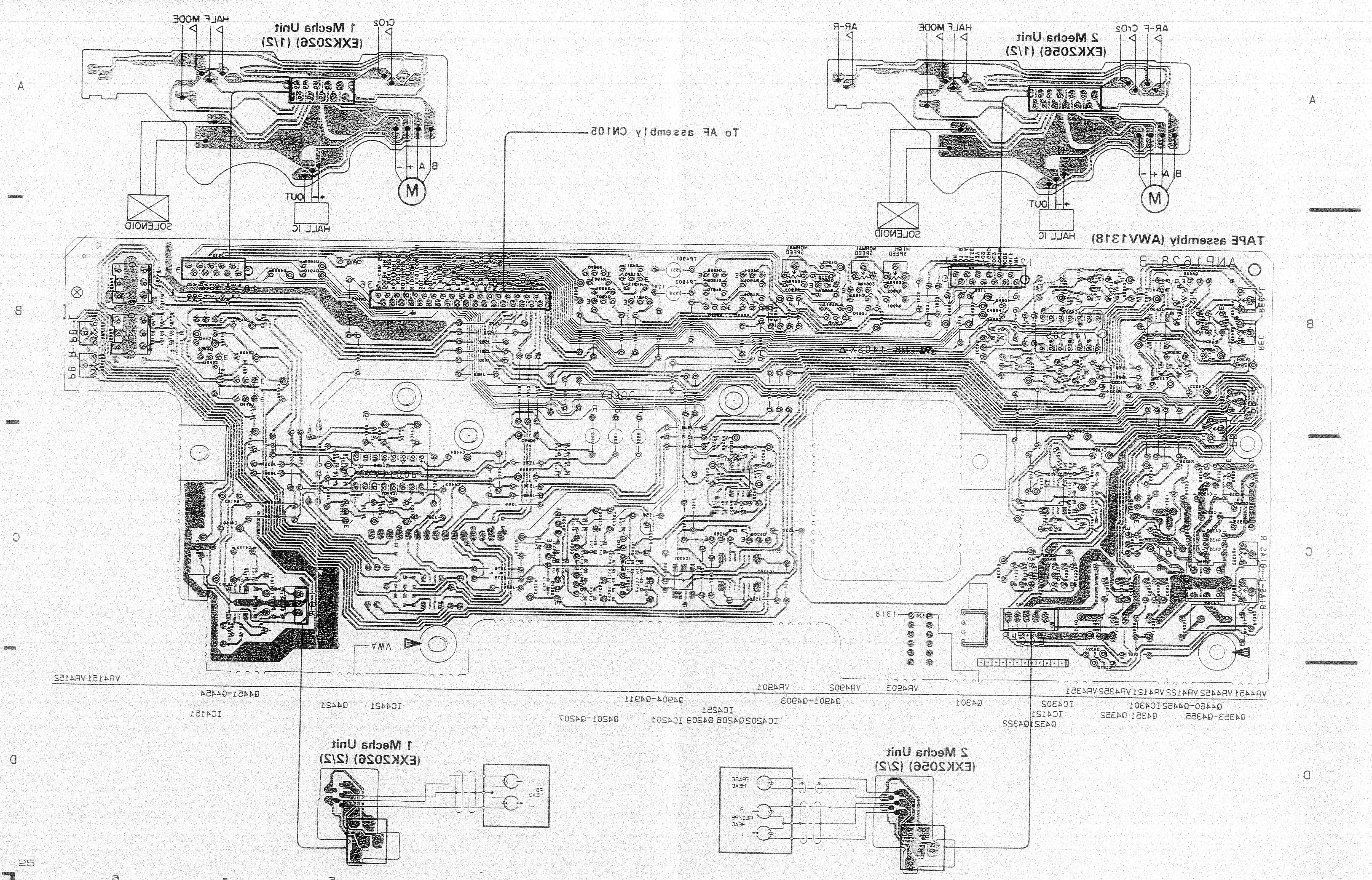
TAPE ASSEMBLY,
1 MECHA UNIT,
2 MECHA UNIT

SCH-3

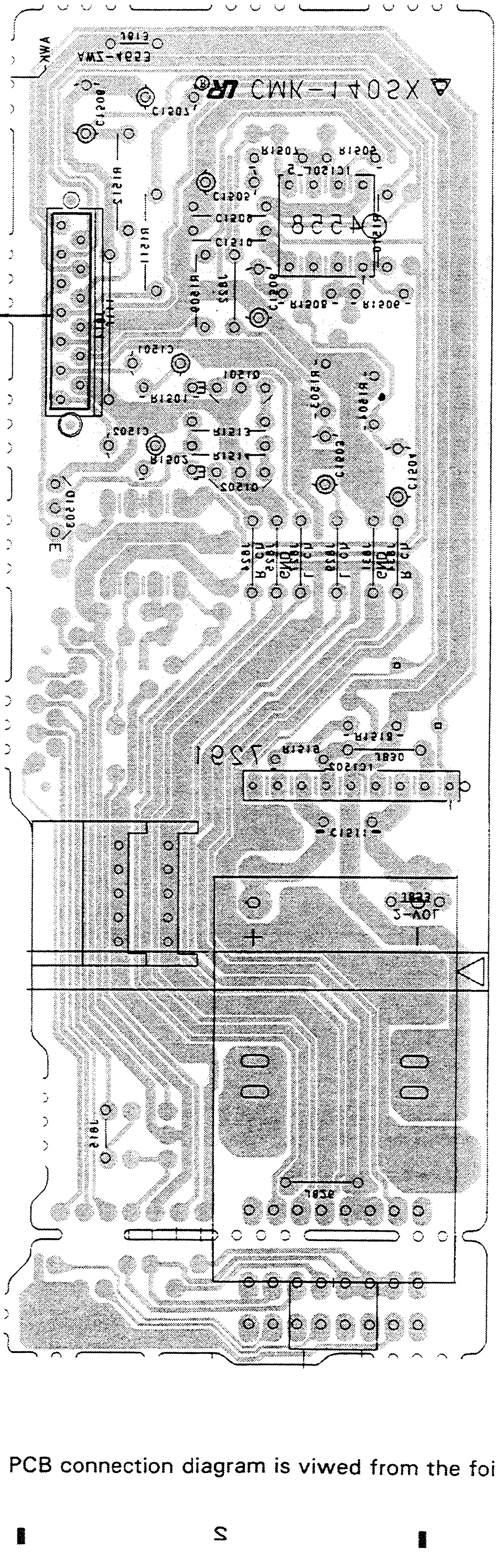
This PCB connection diagram is viewd from the parts mounted side.


AR-F
CrO2
2 Mecha Unit
(EXK2056) (1/2)
HALF MODE
AR-R
CrO2
1 Mecha Unit
(EXK2026) (1/2)
HALF MODE
To AF assembly CN105
B A + -
M
+ -
OUT
HALL IC
SOLENOID
TAPE assembly (AWV1318)
ANP1628-B
HIGH SPEED
NORMAL SPEED
NORMAL SPEED
74LS05
CMK-140SX
DOLBY
L C R
REC L
REC R
PB R
PB L
BIAS R
BIAS L
PB L
PB R
AWV
1318
E G G L R
VR4451 VR4452 VR4122 VR4121 VR4352 VR4351
VR4903 VR4902 VR4901
VR4151 VR4152
Q4460-Q4462 IC4301
Q4353-Q4355 Q4351 Q4352
IC4302
IC4121
Q4321 Q4322
Q4301
Q4901-Q4903
IC4251
IC4202 Q4208 Q4209 IC4201
Q4904-Q4911
Q4201-Q4207
IC4421 Q4421
Q4451-Q4454
IC4151
2 Mecha Unit
(EXK2056) (2/2)
ERASE HEAD
R
REC/PB HEAD
L
1 Mecha Unit
(EXK2026) (2/2)
PB HEAD
R
L

This PCB connection diagram is viwed from the foil side.


1 Mecha Unit
(EXK2026) (1/2)
HALF MODE
CrO2
SOLENOID
HALL IC
OUT
M
To AF assembly CN105
2 Mecha Unit
(EXK2056) (1/2)
AR-R
HALF MODE
CrO2
AR-F
SOLENOID
HALL IC
OUT
M
TAPE assembly (AWV1318)
ANP1628-B
DOLBY
REC
BIAS
AMW
1318
VR4151 VR4152
Q4451-Q4454
IC4151
Q4421
IC4421
Q4201-Q4207
IC4202 Q4208 Q4209 IC4201
IC4251
Q4904-Q4911
Q4901-Q4903
VR4901
VR4902
VR4903
Q4301
IC4302
IC4121
Q4321 Q4322
Q4460-Q4465 IC4301
Q4352 Q4351
Q4353-Q4355
VR4451 VR4452 VR4121 VR4122 VR4352 VR4351
1 Mecha Unit
(EXK2026) (2/2)
PB HEAD
2 Mecha Unit
(EXK2056) (2/2)
ERASE HEAD
REC/PB HEAD
A
B
C
D
1
2
3
4
5
6

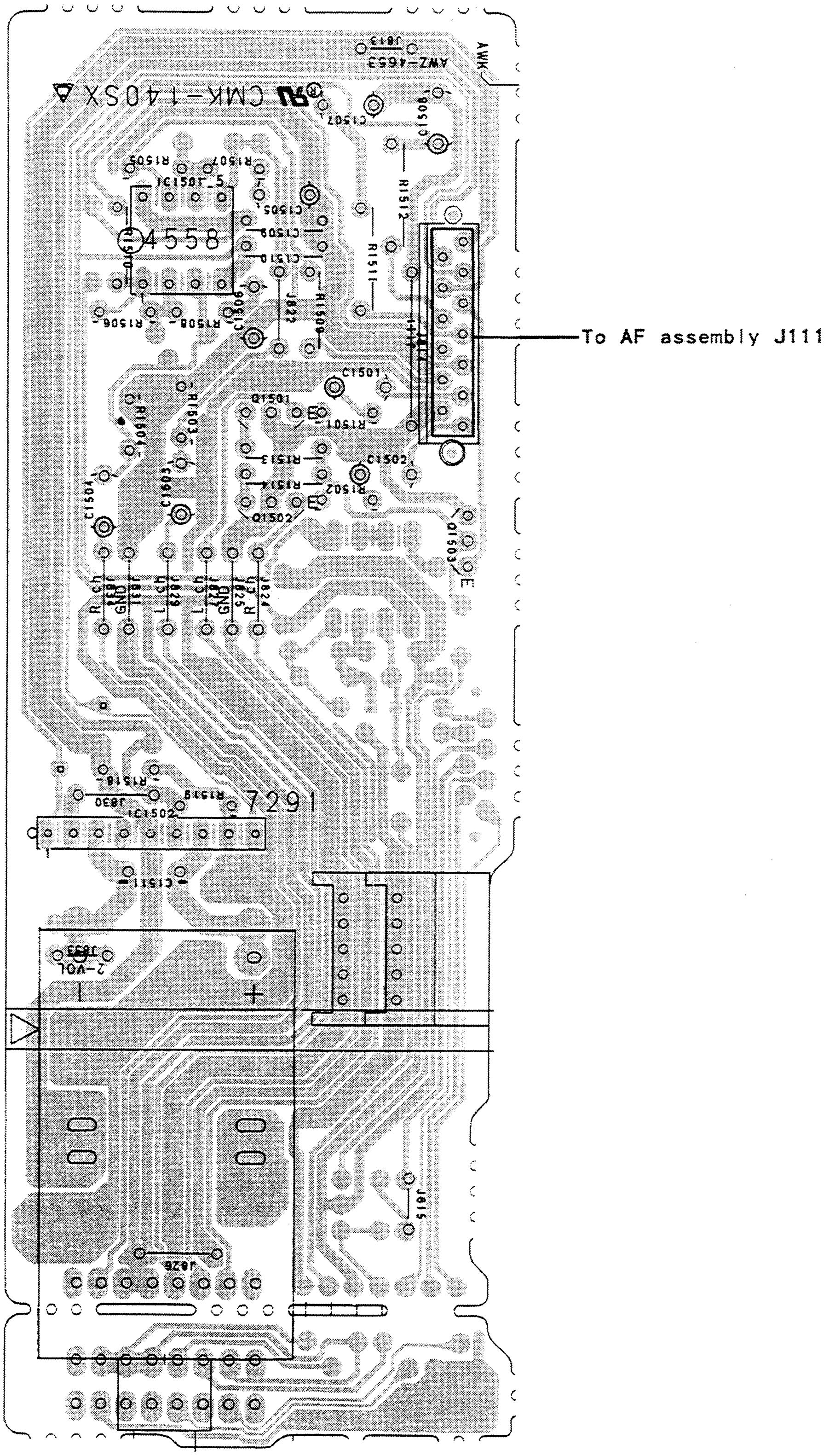
VOLUME assembly (AWZ4653)


AWZ-4653
XS041-WMC
To AF assembly J111
IC1501
4558
IC1502
R1505
R1506
R1507
R1508
R1511
R1512
R1513
R1514
R1518
R1519
C1501
C1502
C1505
C1508
C1510
Q1501
Q1502
Q1503
+
−

This PCB connection diagram is viwed from the foil side.

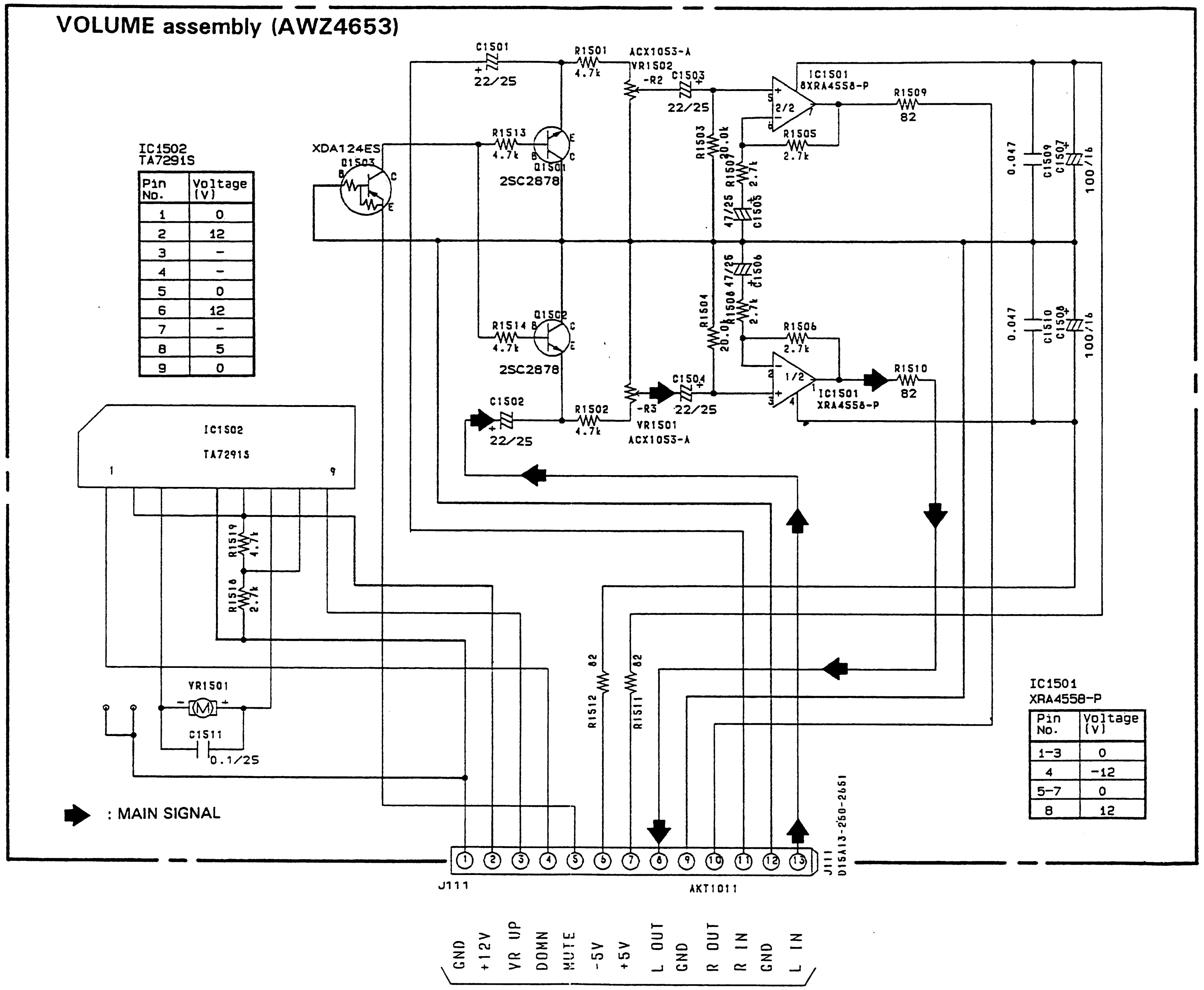
2.4 VOLUME ASSEMBLY

VOLUME assembly (AWZ4653)


J813
AWZ-4653
AWK
CMK-1405X
C1507
C1506
R1505
R1507
IC1501
C1505
C1509
C1510
4558
R1510
R1506
R1508
C1508
J822
R1509
R1512
R1511
J811
To AF assembly J111
C1501
Q1501
R1501
R1504
R1503
R1513
R1514
C1502
R1502
Q1502
Q1503
E
C1504
C1503
R ch
GND
J831
L ch
J829
J827
J825
R
J824
R1518
J830
R1519
IC1502
7291
C1511
J833
2-VOL
+
J826
J815

This PCB connection diagram is viewd from the parts mounted side.

VOLUME assembly (AWZ4653)


C1501
22/25
R1501
4.7k
ACX1053-A
VR1502
-R2
C1503
22/25
IC1501
8XRA4558-P
2/2
R1509
82
R1513
4.7k
Q1501
2SC2878
XDA124ES
Q1503
R1503
20.0k
R1505
2.7k
R1507
2.7k
47/25
C1505
0.047
C1509
C1507
100/16
C1506
47/25
R1508
2.7k
R1504
20.0k
R1514
4.7k
Q1502
2SC2878
R1506
2.7k
1/2
IC1501
XRA4558-P
R1510
82
C1504
22/25
-R3
VR1501
ACX1053-A
C1502
22/25
R1502
4.7k
0.047
C1510
C1508
100/16
IC1502
TA7291S
R1519
4.7k
R1518
2.7k
VR1501
C1511
0.1/25
R1512
82
R1511
82
J111
AKT1011
J111
D15A13-250-2651
GND
+12V
VR UP
DOWN
MUTE
-5V
+5V
L OUT
GND
R OUT
R IN
GND
L IN

IC1502
TA7291S

Pin No.	Voltage (V)
1	0
2	12
3	−
4	−
5	0
6	12
7	−
8	5
9	0

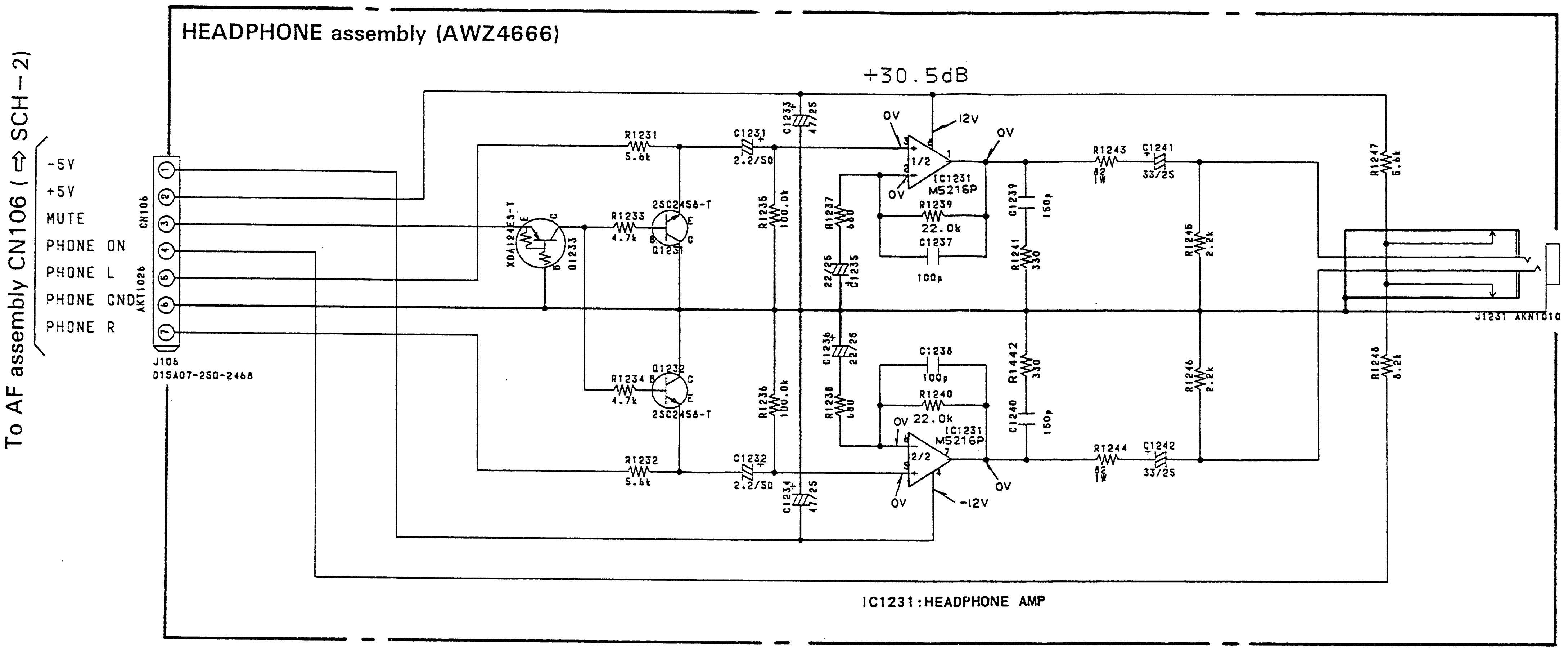
IC1501
XRA4558-P

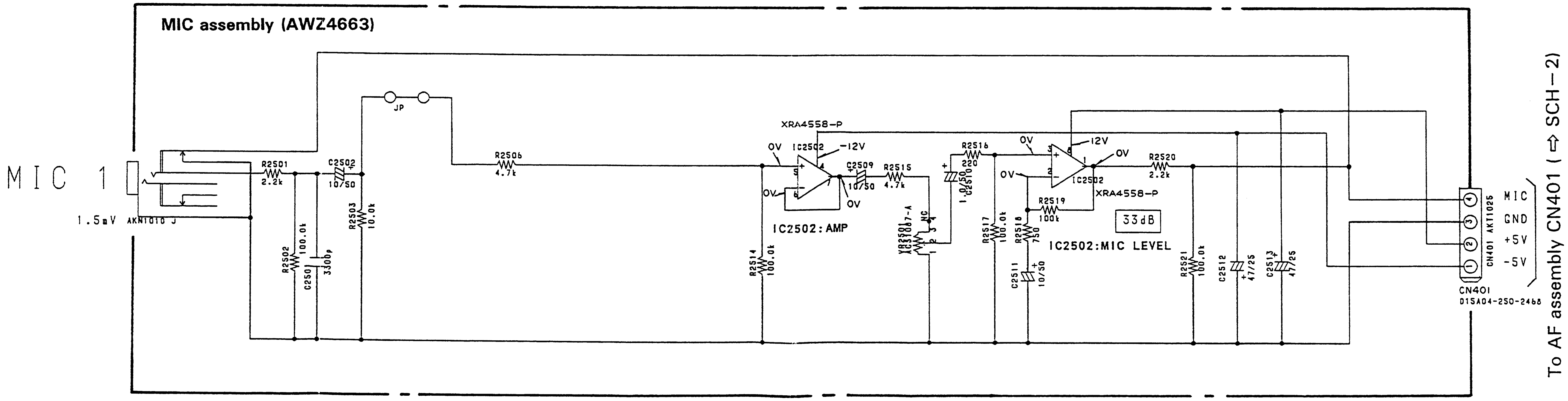
Pin No.	Voltage (V)
1-3	0
4	-12
5-7	0
8	12

➡ : MAIN SIGNAL

To AF assembly J111 (⇨ SCH−2)

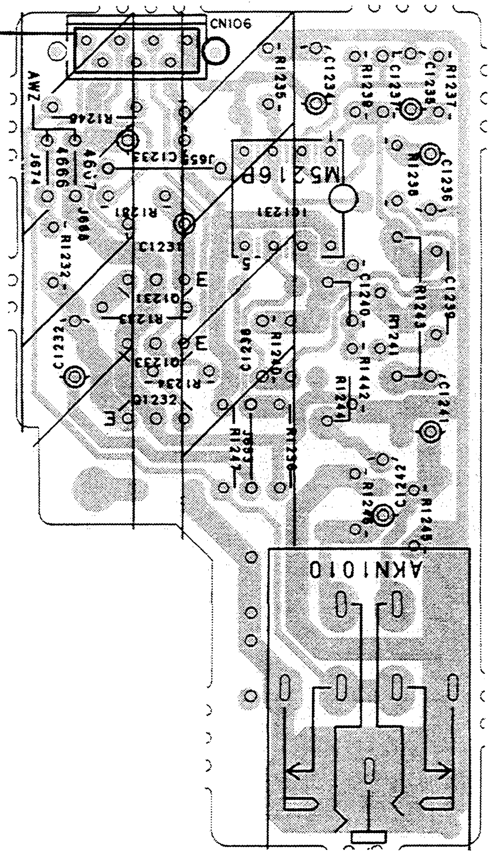
2.5 HEADPHONE ASSEMBLY AND MIC ASSEMBLY


HEADPHONE assembly (AWZ4666)
To AF assembly CN106 (⇨ SCH−2)
-5V
+5V
MUTE
PHONE ON
PHONE L
PHONE GND
PHONE R
CN106 AKT1026
J106 D1SA07-250-2468
+30.5dB
R1231 5.6k
R1232 5.6k
R1233 4.7k
R1234 4.7k
XDA124E3-T Q1233
2SC2458-T Q1231
2SC2458-T Q1232
C1231 2.2/50
C1232 2.2/50
C1233 47/25
C1234 47/25
R1235 100.0k
R1236 100.0k
R1237 680
R1238 680
C1235 22/25
C1236 22/25
IC1231 M5216P 1/2
IC1231 M5216P 2/2
12V
-12V
0V
R1239 22.0k
R1240 22.0k
C1237 100p
C1238 100p
C1239 150p
C1240 150p
R1241 330
R1442 330
R1243 82 1W
R1244 82 1W
C1241 33/25
C1242 33/25
R1245 2.2k
R1246 2.2k
R1247 5.6k
R1248 8.2k
J1231 AKN1010
IC1231:HEADPHONE AMP


MIC assembly (AWZ4663)
MIC 1
1.5mV AKN1010 J
JP
R2501 2.2k
R2502 100.0k
C2501 330p
C2502 10/50
R2503 10.0k
R2506 4.7k
XRA4558-P
IC2502
0V
-12V
12V
C2509 10/50
R2514 100.0k
R2515 4.7k
IC2502:AMP
VR2501
R2516 220
C2510 1.0/50
R2517 100.0k
R2518 750
C2511 10/50
R2519 100k
33dB
IC2502:MIC LEVEL
R2520 2.2k
R2521 100.0k
C2512 47/25
C2513 47/25
MIC
GND
+5V
-5V
CN401 AKT1025
CN401 D1SA04-250-2468
To AF assembly CN401 (⇨ SCH−2)

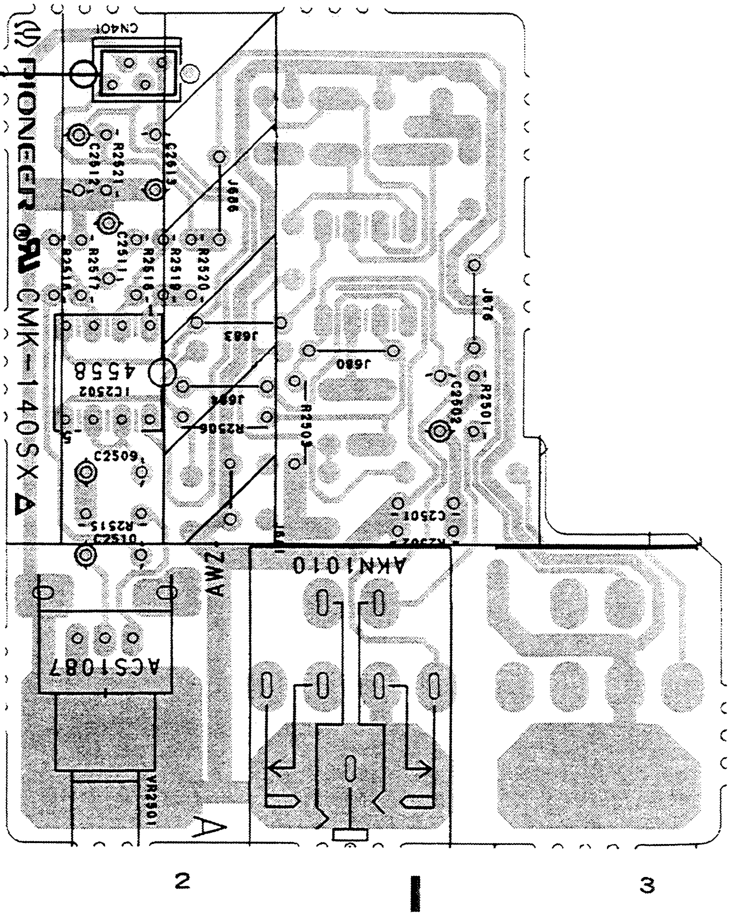
This PCB connection diagram is viewd from the parts mounted side.

HEADPHONE assembly (AWZ4666)


To AF assembly CN106

CN106
AWZ
4666
J674
R1248
J655
C1233
M5216B
IC1231
R1235
C1234
R1236
C1237
R1237
C1235
R1238
C1236
R1231
J688
R1232
C1231
Q1231
E
R1233
C1232
Q1233
R1234
Q1232
C1240
R1243
C1239
C1238
R1240
R1241
R1442
R1244
C1241
J651
R1247
R1239
C1242
R1246
R1245
AKN1010

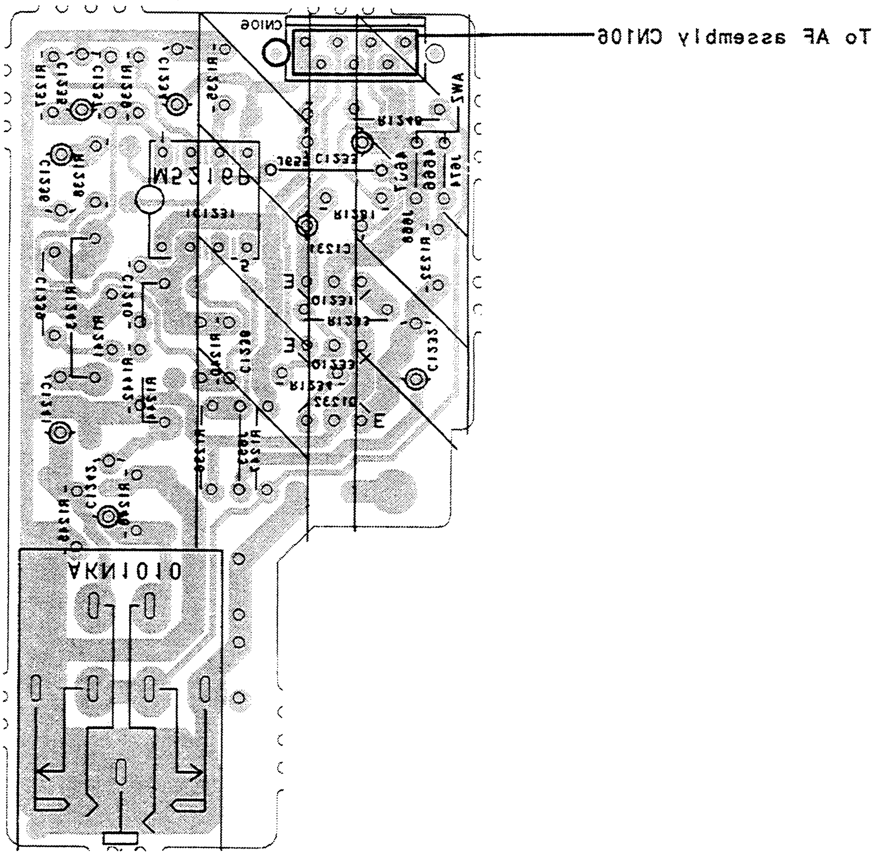
MIC assembly (AWZ4663)


To AF assembly CN401

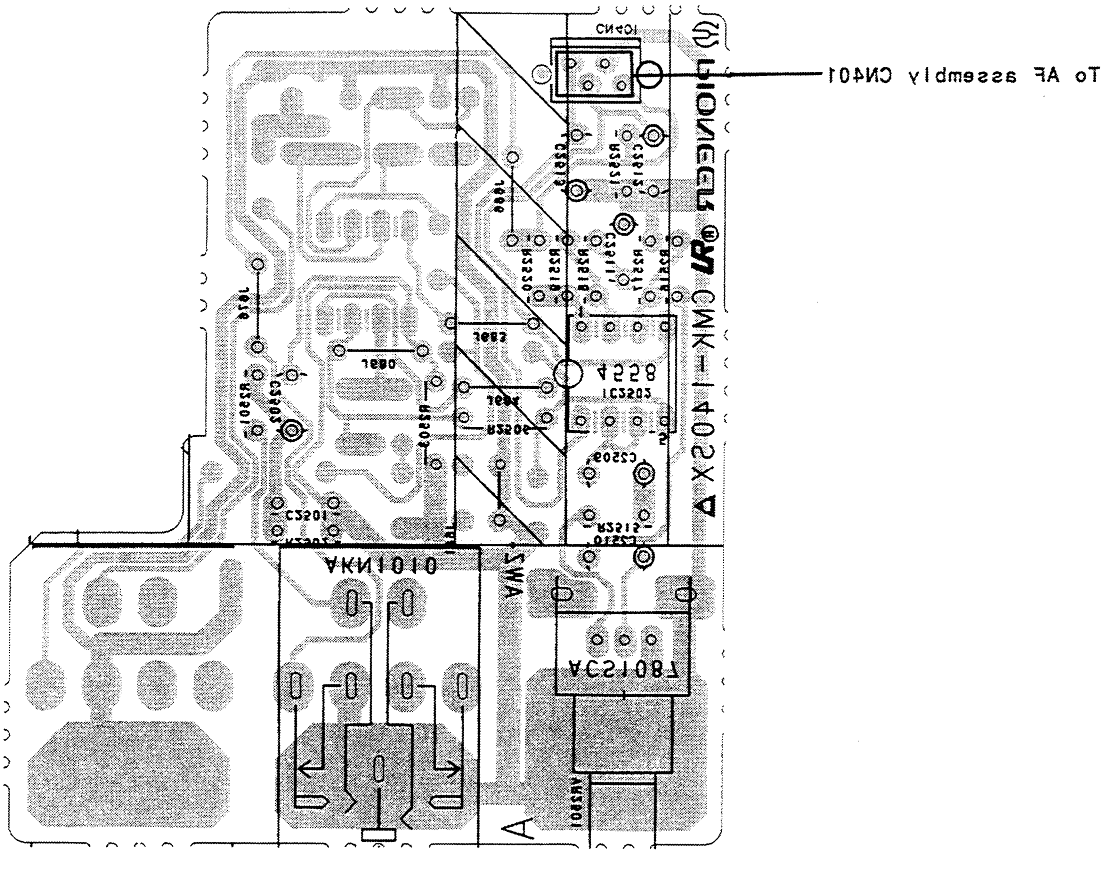
CN401
PIONEER
CMK-140SX
R2521
C2512
C2513
J686
C2511
R2520
R2516
R2517
R2518
R2519
J683
4558
IC2502
J684
R2506
J680
R2503
J676
C2503
R2501
C2509
R2515
C2510
C2501
R2502
AWZ
AKN1010
ACS1087
VR2901

This PCB connection diagram is viwed from the foil side.

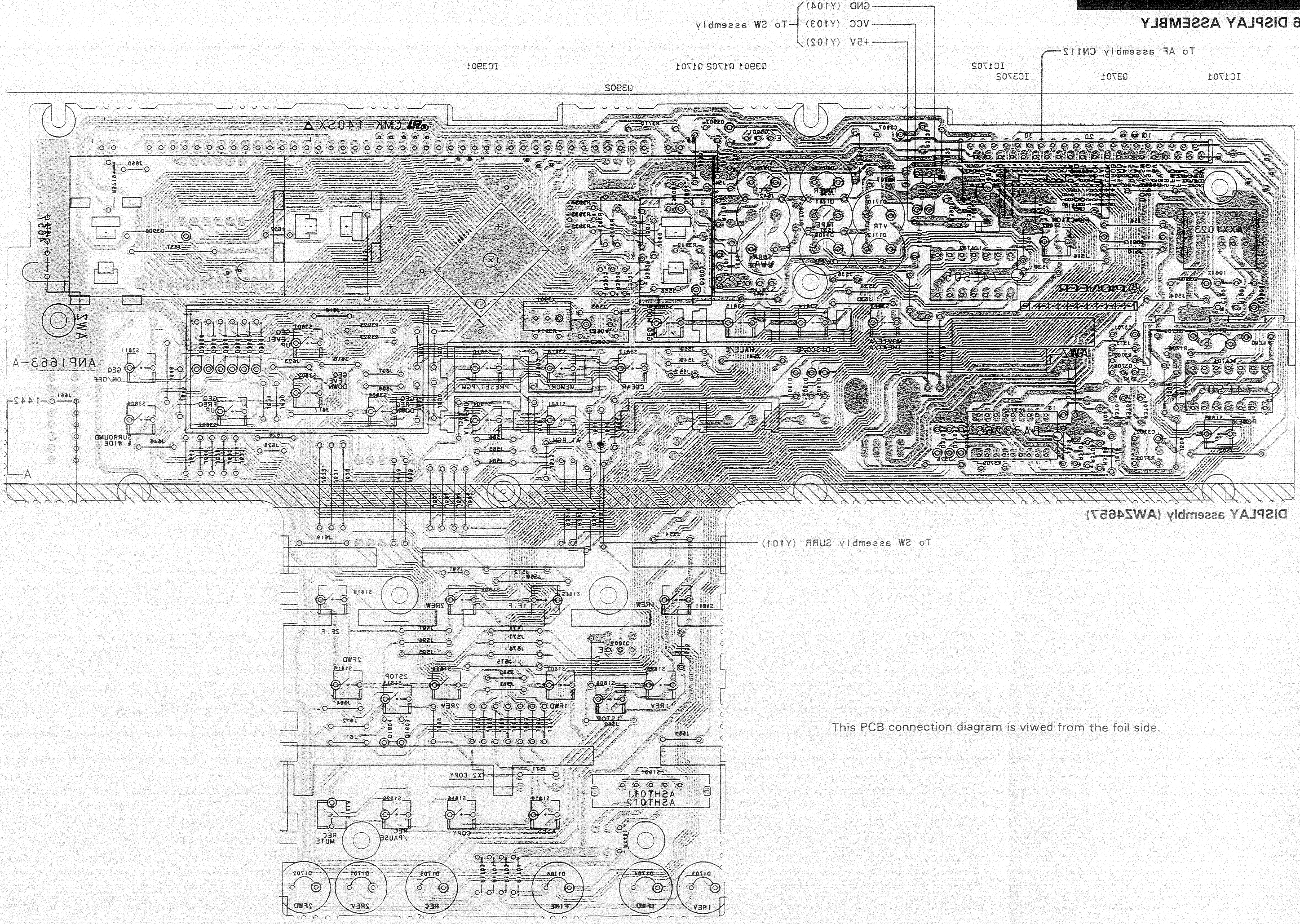
HEADPHONE assembly (AWZ4666)


To AF assembly CN106
CN106
ZWA
IC1231
M5218
AKN1010
E

MIC assembly (AWZ4663)


To AF assembly CN401
CN401
PIONEER
CMK-1-40
4558
IC2202
AKN1010
ACS1081
ZWA
A

2.6 DISPLAY ASSEMBLY

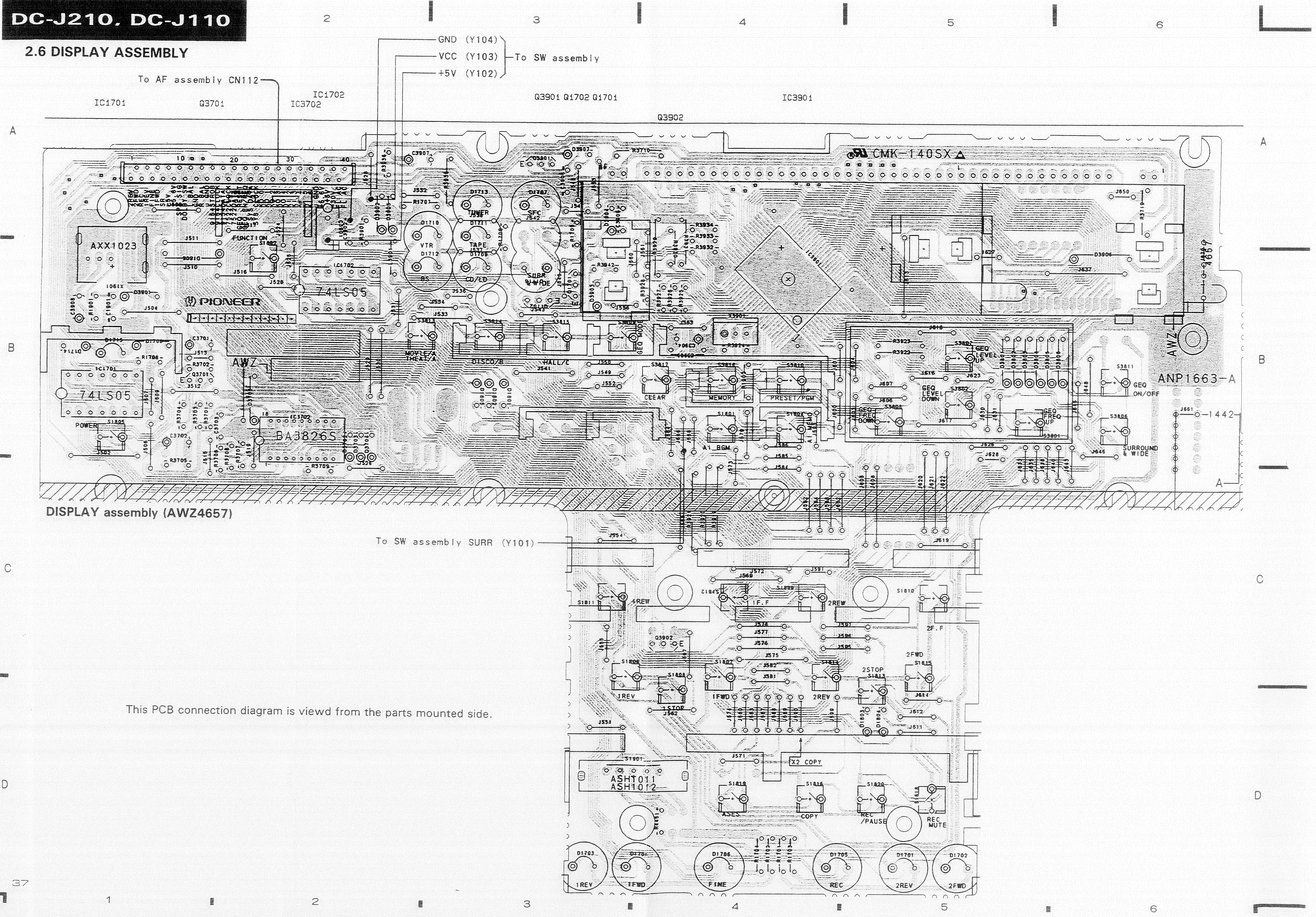


GND (Y104)
VCC (Y103)
+5V (Y102)
To SW assembly
To AF assembly CN112
IC3901
Q3901 Q1702 Q1701
Q3902
IC1702
IC3702
Q3701
IC1701
To SW assembly SURR (Y101)
CMK-1405X
ANP1663-A
AXX1023
PIONEER
ASH1011
ASH1012
GEO ON/OFF
SURROUND & WIDE
GEO LEVEL UP
GEO LEVEL DOWN
GEO FREQ UP
GEO FREQ DOWN
PRESET/PGM
MEMORY
CLEAR
POWER
HALL
1REV
1FWD
1STOP
1F.F
2REW
2F.F
2FWD
2REV
2STOP
1REW
REC MUTE
REC /PAUSE
COPY
X2 COPY
ACES
REC
1FWD
1REV
2FWD
2REV
A
B
C
D
1
2
3
4
5
6

DISPLAY assembly (AWZ4657)

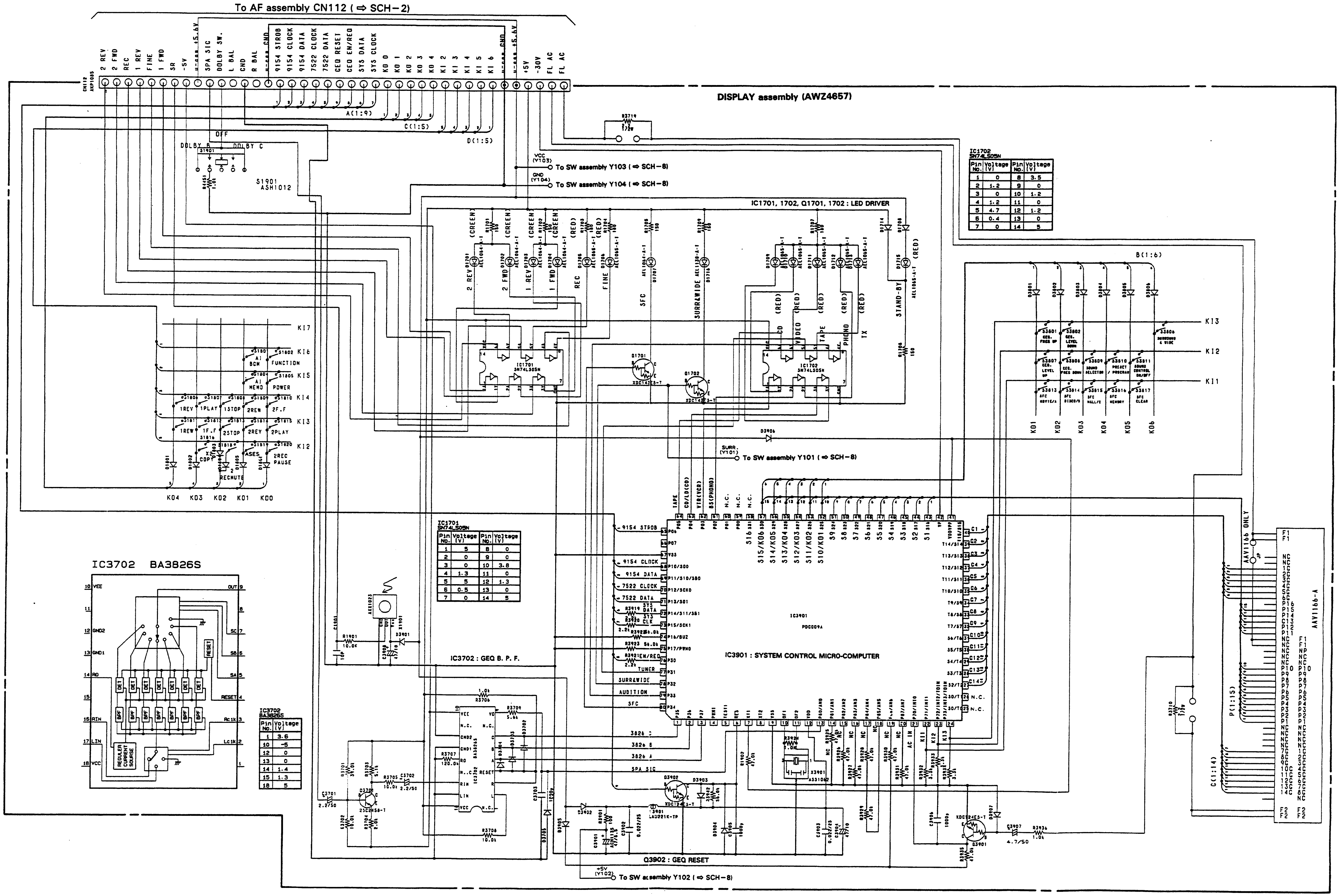
This PCB connection diagram is viwed from the foil side.

2.6 DISPLAY ASSEMBLY


GND (Y104)
VCC (Y103)
+5V (Y102)
To SW assembly
To AF assembly CN112
IC1701
Q3701
IC1702
IC3702
Q3901 Q1702 Q1701
IC3901
Q3902
To SW assembly SURR (Y101)
AXX1023
PIONEER
74LS05
BA3826S
AWZ
CMK-140SX
ANP1663-A
ASHT011
ASH1012
FUNCTION
POWER
VTR
TUNER
SFC
TAPE
BS
CD/LD
SURR WIDE
MOVIE/A THEAT/A
DISCO/B
HALL/C
GEQ MODE
CLEAR
MEMORY
PRESET/PGM
AI BGM
AI EDIT
GEQ LEVEL UP
GEQ LEVEL DOWN
GEQ FREQ DOWN
GEQ FREQ UP
GEQ ON/OFF
SURROUND & WIDE
1REW
1F.F
2REW
2F.F
1REV
1STOP
1FWD
2REV
2STOP
2FWD
X2 COPY
ASES
COPY
REC /PAUSE
REC MUTE
FINE
REC
1
2
3
4
5
6
A
B
C
D

DISPLAY assembly (AWZ4657)

This PCB connection diagram is viewd from the parts mounted side.



To AF assembly CN112 (⇨ SCH-2)
DISPLAY assembly (AWZ4657)
CN112
2 REV
2 FWD
REC
1 REV
FINE
1 FWD
SR
-5V
+5.6V
SPA SIC
DOLBY SW.
L BAL
GND
R BAL
GND
9154 STROB
9154 CLOCK
9154 DATA
7522 CLOCK
7522 DATA
GEQ RESET
GEQ EN/REQ
SYS DATA
SYS CLOCK
KO 0
KO 1
KO 2
KO 3
KO 4
KI 2
KI 3
KI 4
KI 5
KI 6
GND
+5.6V
+5V
-30V
FL AC
FL AC
A(1:9)
C(1:5)
D(1:5)
OFF
DOLBY B
DOLBY C
S1901
S1901 ASH1012
VCC (Y103)
To SW assembly Y103 (⇨ SCH-8)
GND (Y104)
To SW assembly Y104 (⇨ SCH-8)
R3714
IC1701, 1702, Q1701, 1702 : LED DRIVER
(GREEN)
(RED)
2 REV
2 FWD
1 REV
1 FWD
REC
FINE
SFC
SURR&WIDE
CD
VIDEO
TAPE
PHONO
TX
STAND-BY
IC1701 SN74LS05N
IC1702 SN74LS05N
Q1701
Q1702
D3906
SURR. (Y101)
To SW assembly Y101 (⇨ SCH-8)
B(1:6)
KI3
KI2
KI1
KO1
KO2
KO3
KO4
KO5
KO6
KI7
KI6
KI5
KI4
KI3
KI2
AI BCN
FUNCTION
AI MEMO
POWER
1REV
1PLAY
1STOP
2REW
2F.F
1REW
1F.F
2STOP
2REV
2PLAY
COPY
ASES
2REC PAUSE
RECMUTE
KO4
KO3
KO2
KO1
KO0
IC3702 BA3826S
VEE
GND2
GND1
RO
RIN
LIN
VCC
OUT
SC
SB
SA
RESET
Rc1k
Lc1k
DET
BPF
REGULATED CURRENT SOURCE
IC3702 : GEQ B. P. F.
9154 STROB
9154 CLOCK
9154 DATA
7522 CLOCK
7522 DATA
SYS DATA
SYS CLK
GEQ EN/REQ
TUNER
SURR&WIDE
AUDITION
SFC
3826 C
3826 B
3826 A
SPA SIC
IC3901
PDC009A
IC3901 : SYSTEM CONTROL MICRO-COMPUTER
TAPE
CD/LD(CD)
VTR(VCR)
SS(PHONO)
N.C.
S16
S15/KO6
S14/KO5
S13/KO4
S12/KO3
S11/KO2
S10/KO1
S9
S8
S7
S6
S5
S4
S3
S2
S1
X3901
Q3902
D3903
Q3901
C3907
R3934
Q3902 : GEQ RESET
+5V (Y102)
To SW assembly Y102 (⇨ SCH-8)
AAV1166 ONLY
AAV1166-A
P(1:15)
C(1:14)
F1
F2
NC
NP
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
1G
2G
3G
4G
5G
6G
7G
8G
9G
10G
11G
12G
13G
14G

IC1702
SN74LS05N

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	8	3.5
2	1.2	9	0
3	0	10	1.2
4	1.2	11	0
5	4.7	12	1.2
6	0.4	13	0
7	0	14	5

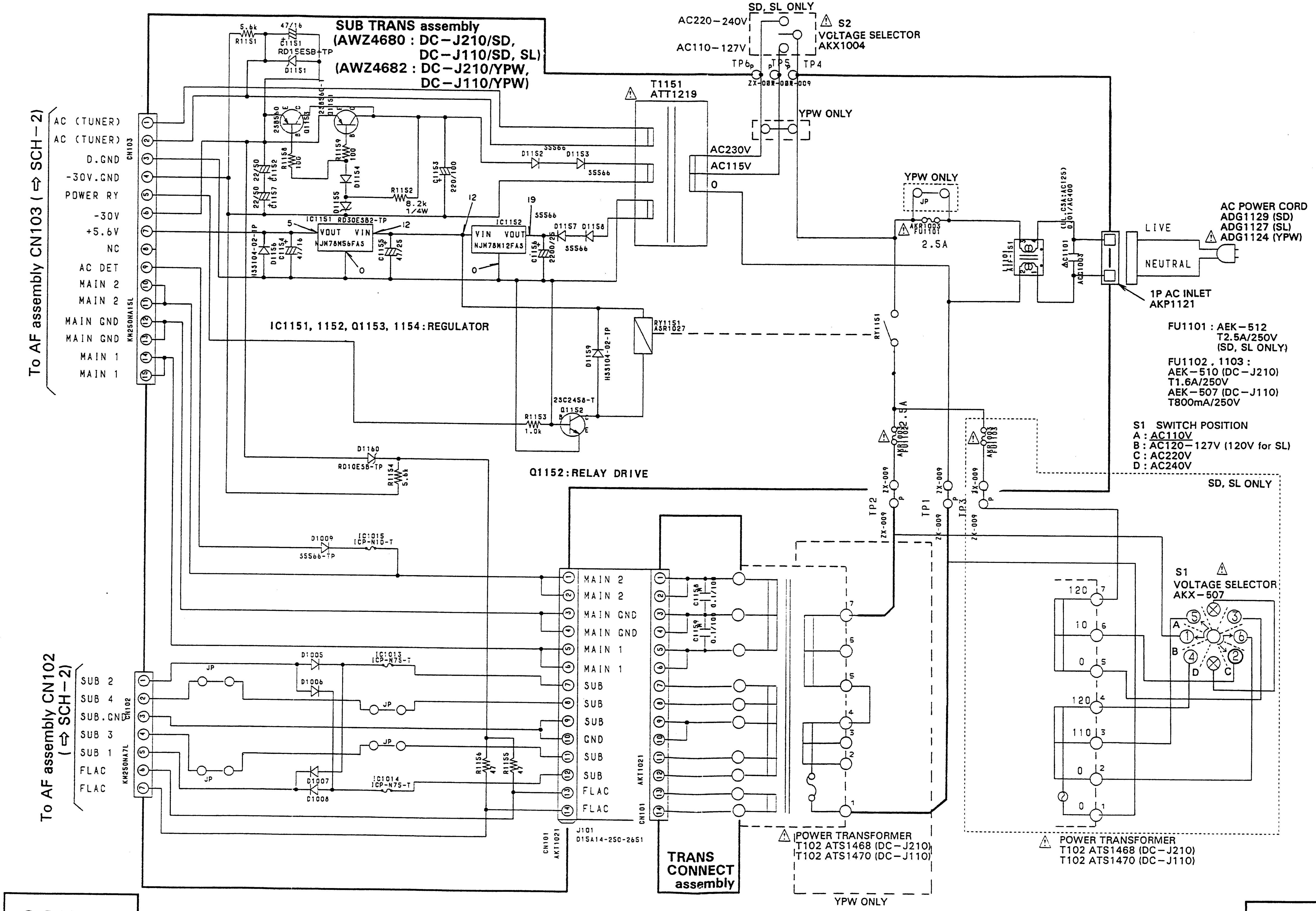
IC1701
SN74LS05N

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	5	8	0
2	0	9	0
3	0	10	3.8
4	1.3	11	0
5	5	12	1.3
6	0.5	13	0
7	0	14	5

IC3702
BA3826S

Pin No.	Voltage (V)
1	3.6
10	-5
12	0
13	0
14	1.4
15	1.3
18	5

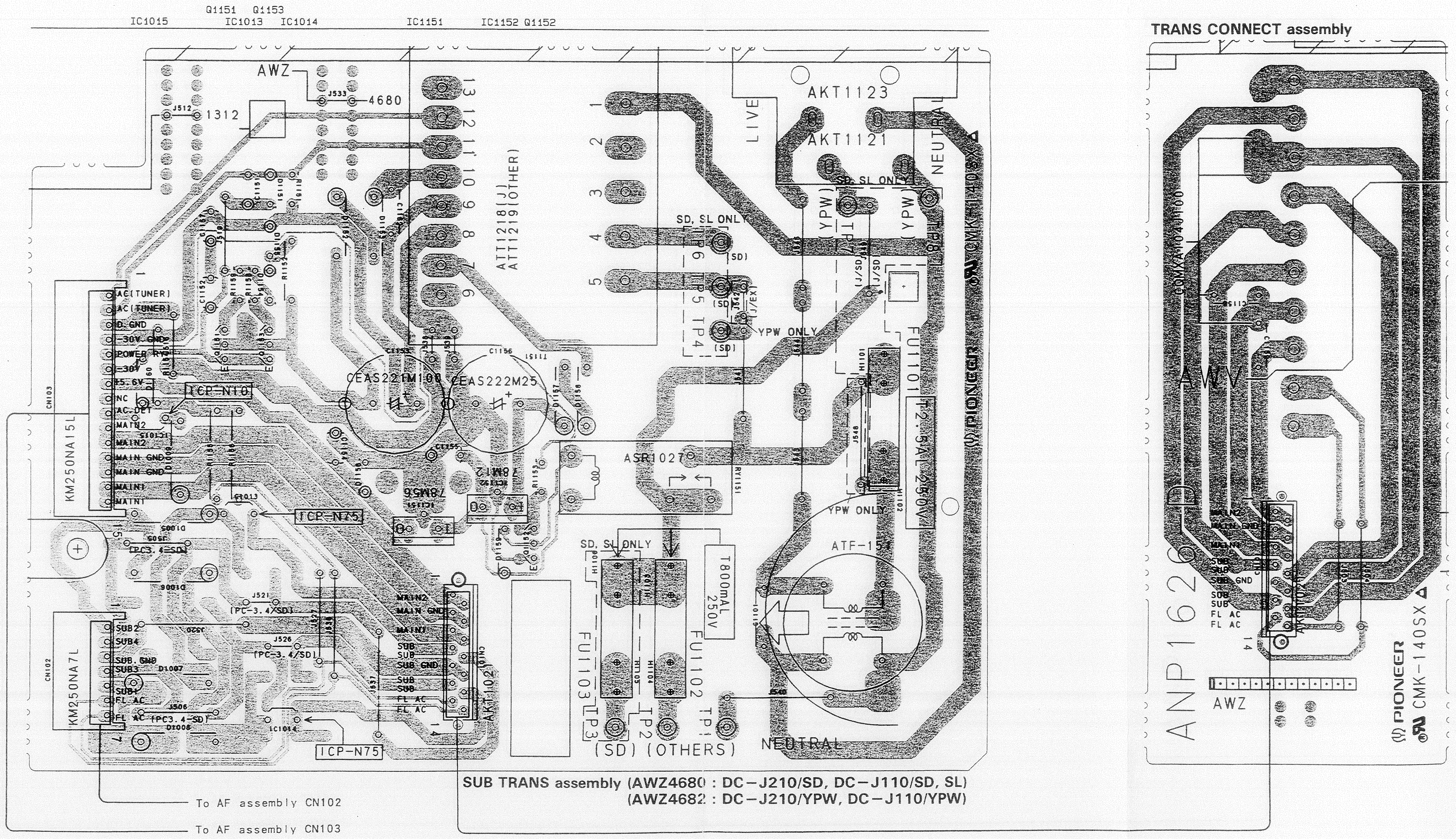
2.7 SUB TRANS ASSEMBLY AND TRANS CONNECT ASSEMBLY


SUB TRANS assembly
(AWZ4680 : DC-J210/SD, DC-J110/SD, SL)
(AWZ4682 : DC-J210/YPW, DC-J110/YPW)
To AF assembly CN103 (⇨ SCH-2)
AC (TUNER)
AC (TUNER)
D.GND
-30V.GND
POWER RY
-30V
+5.6V
NC
AC DET
MAIN 2
MAIN 2
MAIN GND
MAIN GND
MAIN 1
MAIN 1
CN103
KH250NA15L
R1151 5.6k
C1151 47/16
RD15ESB-TP
D1151
Q1151 2SB560
Q1154 2SB560-T
R1158 100
R1159 100
D1154
D1155
C1152 22/50
C1157 22/50
C1153 220/100
R1152 8.2k 1/4W
D1152 SS566
D1153 SS566
IC1151 RD30ES82-TP
VOUT VIN
NJM78M56FAS
IC1152
VIN VOUT
NJM78M12FAS
C1155 47/25
C1156 2200/25
D1156 HS3104-02-TP
C1154 47/16
D1157 D1158 SS566
IC1151, 1152, Q1153, 1154:REGULATOR
RY1151 ASR1027
D1159 HS3104-02-TP
2SC2458-T Q1152
R1153 1.0k
Q1152:RELAY DRIVE
D1160 RD10ESB-TP
R1154 5.6k
D1009 SS566-TP
IC1015 ICP-N10-T
T1151 ATT1219
AC230V
AC115V
0
SD, SL ONLY
AC220-240V
AC110-127V
S2 VOLTAGE SELECTOR AKX1004
TP6 TP5 TP4
ZX-009
YPW ONLY
JP
FU1101
2.5A
AC POWER CORD
ADG1129 (SD)
ADG1127 (SL)
ADG1124 (YPW)
LIVE
NEUTRAL
1P AC INLET AKP1121
FU1101 : AEK-512 T2.5A/250V (SD, SL ONLY)
FU1102, 1103 : AEK-510 (DC-J210) T1.6A/250V AEK-507 (DC-J110) T800mA/250V
S1 SWITCH POSITION
A : AC110V
B : AC120-127V (120V for SL)
C : AC220V
D : AC240V
SD, SL ONLY
FU1102
FU1103
TP1 TP2 TP3
To AF assembly CN102 (⇨ SCH-2)
SUB 2
SUB 4
SUB.GND
SUB 3
SUB 1
FLAC
FLAC
CN102
KH250NA7L
JP
D1005
IC1013 ICP-N75-T
D1006
D1007
D1008
IC1014 ICP-N75-T
R1156 47
R1155 47
MAIN 2
MAIN 2
MAIN GND
MAIN GND
MAIN 1
MAIN 1
SUB
SUB
SUB
GND
SUB
SUB
FLAC
FLAC
CN101 AKT1021
J101 D1SA14-250-2651
C1158 0.1/100
C1159 0.1/100
CN101 AKT1021
TRANS CONNECT assembly
POWER TRANSFORMER
T102 ATS1468 (DC-J210)
T102 ATS1470 (DC-J110)
YPW ONLY
S1 VOLTAGE SELECTOR AKX-507
120 10 0 120 110 0 0
A B C D
POWER TRANSFORMER
T102 ATS1468 (DC-J210)
T102 ATS1470 (DC-J110)

SCH-7 SUB TRANS ASSEMBLY, TRANS CONNECT ASSEMBLY

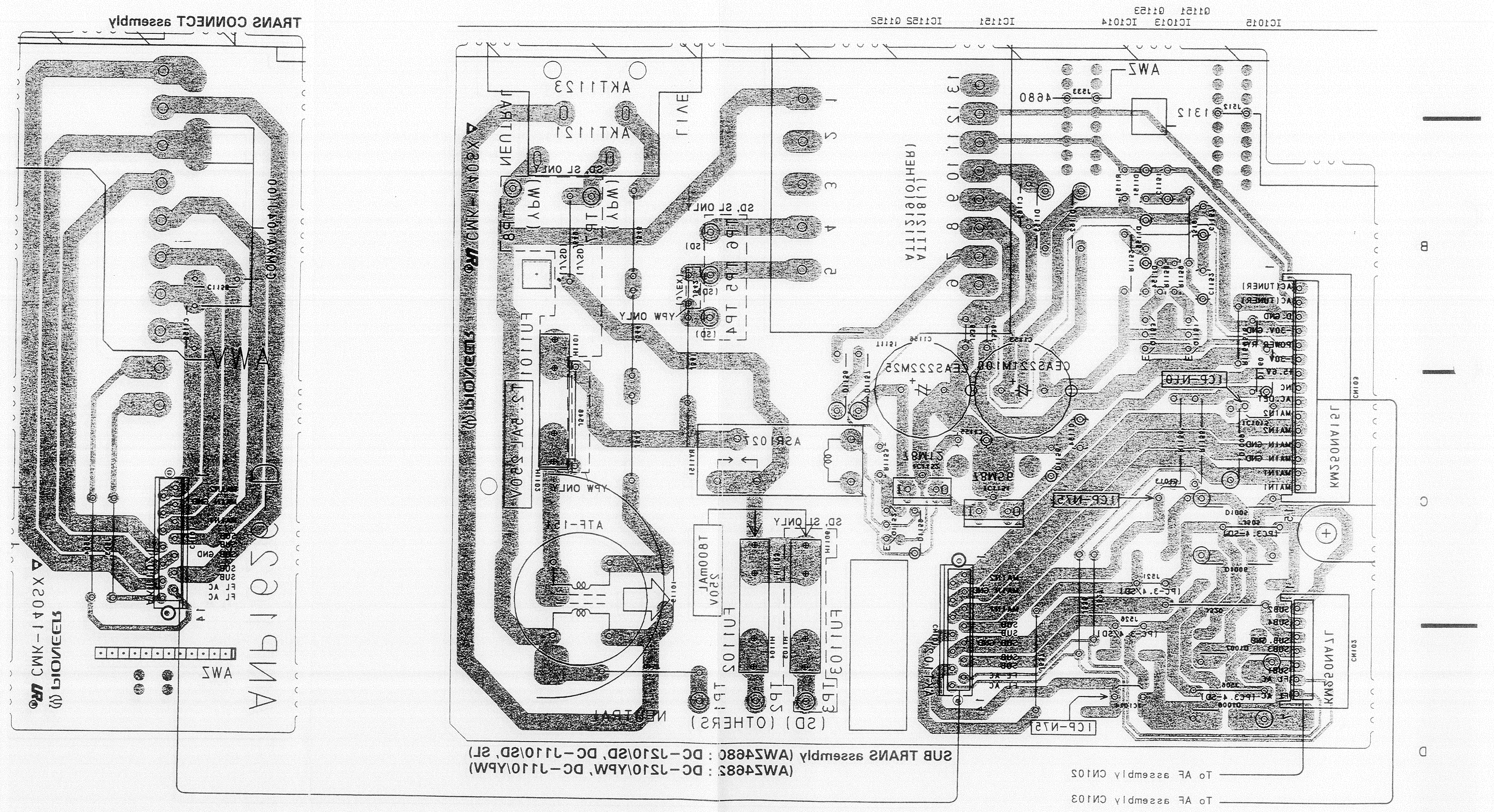
SUB TRANS ASSEMBLY, TRANS CONNECT ASSEMBLY **SCH-7**

This PCB connection diagram is viewd from the parts mounted side.


1
2
3
4
5
6
A
B
C
D
IC1015
Q1151 Q1153
IC1013 IC1014
IC1151
IC1152 Q1152
TRANS CONNECT assembly
AWZ
J533
4680
J512
1312
AKT1123
AKT1121
LIVE
NEUTRAL
SD, SL ONLY
(YPW)
(YPW)
ATT1218(J)
ATT1219(OTHER)
13 12 11 10 9 8 7 6
1 2 3 4 5
TP6 TP5 TP4
(SD)
(J/EX)
(J/SD)
YPW ONLY
FU1101
T2.5AL 250V
CMK-140SX
PIONEER
CEAS221M100
CEAS222M25
ASR1027
78M12
78M5
ICP-N10
ICP-N75
AC(TUNER)
AC(TUNER)
D.GND
-30V GND
POWER RY
-30V
+5.6V
NC
AC.DET
MAIN2
MAIN2
MAIN GND
MAIN GND
MAIN1
MAIN1
CN103
KM250NA15L
PC3.4-SD
PC-3.4/SD
J521
J526
SUB2
SUB4
SUB.GND
SUB3
SUB1
FL AC
FL AC
CN102
KM250NA7L
J506
D1007
D1008
IC1014
MAIN2
MAIN GND
MAIN1
SUB
SUB
SUB GND
SUB
SUB
FL AC
FL AC
AKT1102
CN1
SD, SL ONLY
T800mAL 250V
FU1103
FU1102
TP3 TP2 TP1
(SD) (OTHERS)
NEUTRAL
ATF-157
YPW ONLY
J540
AWV
ANP1620
COMXA1040M100
14
AKT1102
PIONEER CMK-140SX
AWZ
To AF assembly CN102
To AF assembly CN103

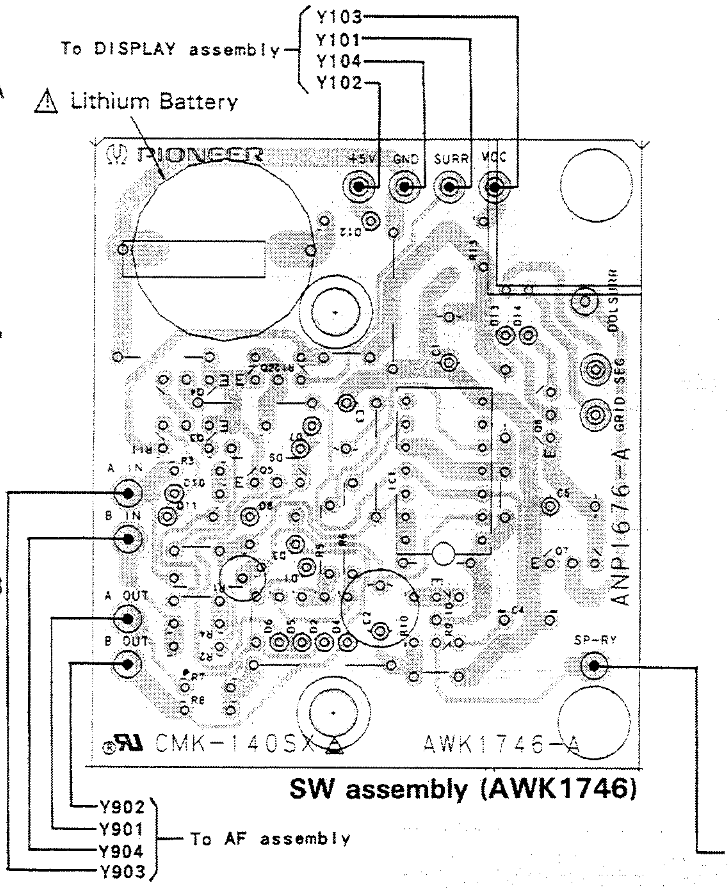
SUB TRANS assembly (AWZ4680 : DC−J210/SD, DC−J110/SD, SL)
(AWZ4682 : DC−J210/YPW, DC−J110/YPW)

This PCB connection diagram is viwed from the foil side.


TRANS CONNECT assembly
SUB TRANS assembly (AWZ4680 : DC-J210/SD, DC-J110/SD, SL)
(AWZ4682 : DC-J210/YPW, DC-J110/YPW)
To AF assembly CN102
To AF assembly CN103
IC1015
IC1013 IC1014
Q1151 Q1153
IC1151
IC1152 Q1152

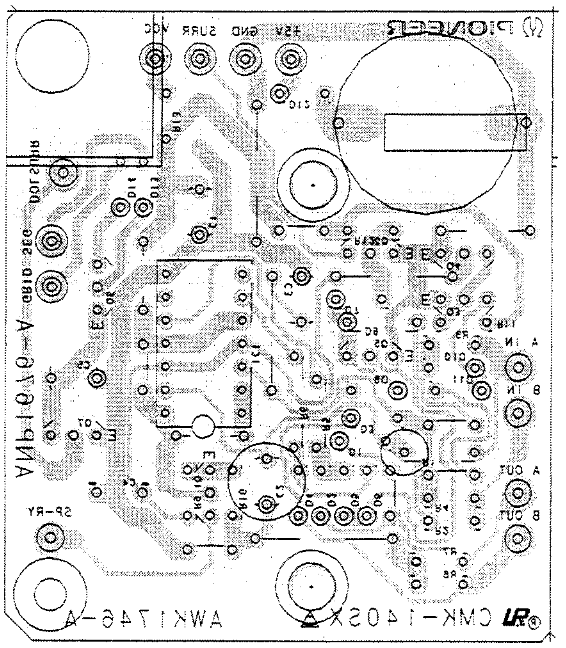
2.8 SW ASSEMBLY

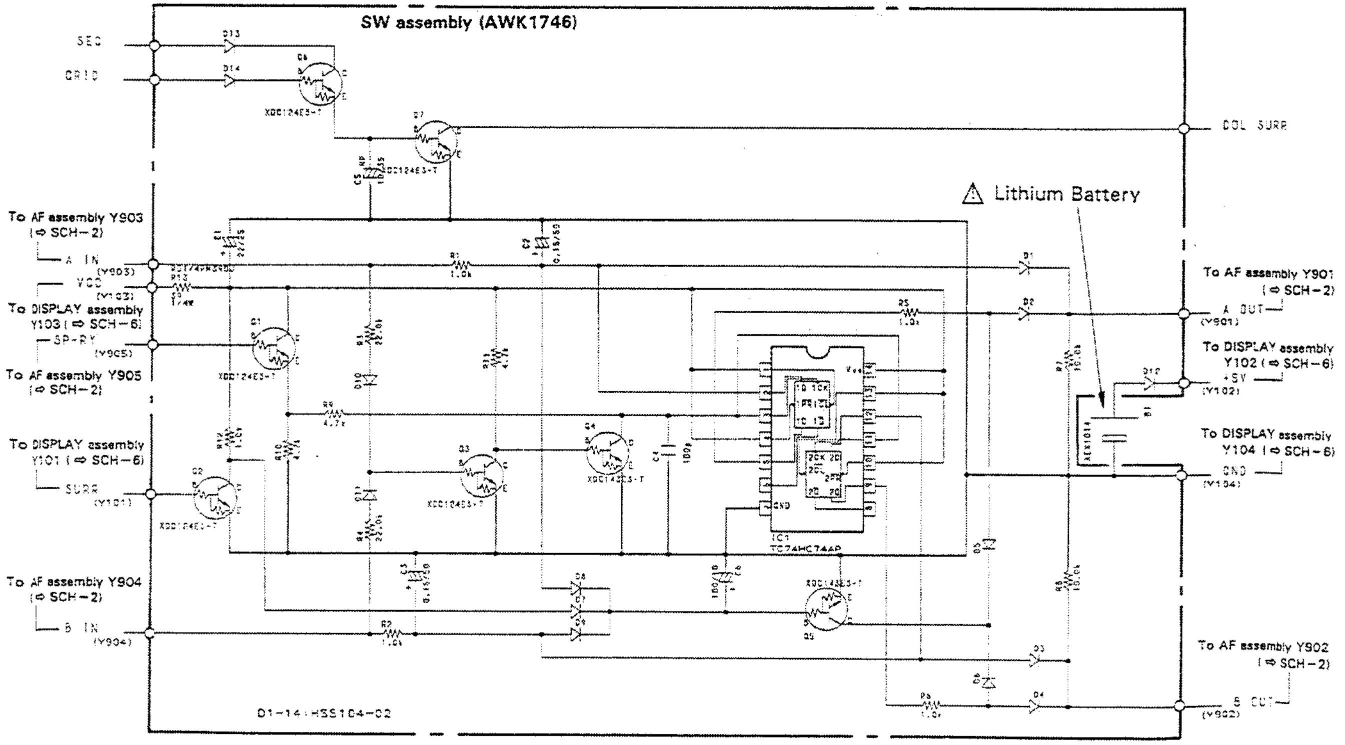
This PCB connection diagram is viewd from the parts mounted side.


To DISPLAY assembly
Y103
Y101
Y104
Y102
⚠ Lithium Battery
PIONEER
+5V
GND
SURR
VCC
D12
R13
D13
D14
DOLSURR
GRID
SEG
IC1
C1
C2
C3
C4
C5
A IN
B IN
A OUT
B OUT
SP-RY
ANP1676-A
CMK-140SX
AWK1746-A
Y902
Y901
Y904
Y903
To AF assembly
To AF assembly Y905

SW assembly (AWK1746)

This PCB connection diagram is viwed from the foil side.

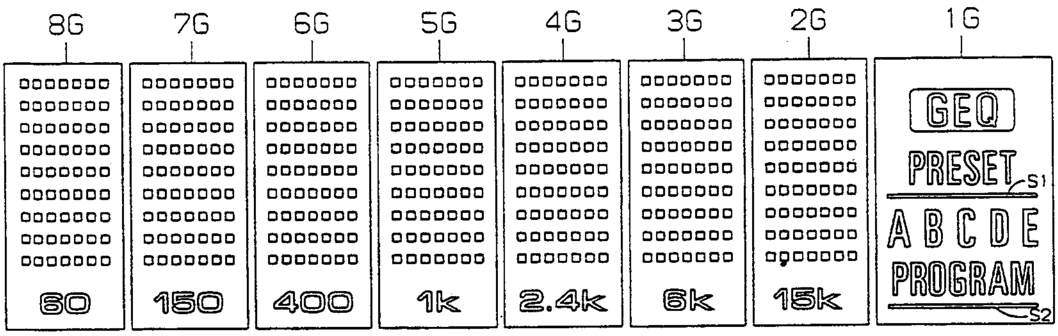

PIONEER
VCC
SURR
GND
+5V
ANP1676-A
AWK1746-A
CMK-140SX
SP-RY
A IN
B IN
A OUT
B OUT

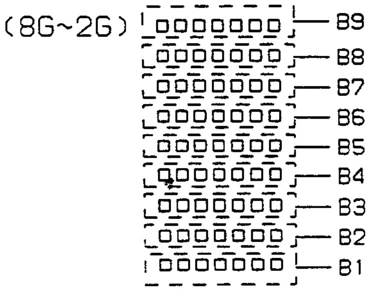

SW assembly (AWK1746)
SEG
GRID
D13
D14
Q6
Q7
COL SURR
⚠ Lithium Battery
To AF assembly Y903 (⇨ SCH-2)
A IN (Y903)
VCC (Y103)
To DISPLAY assembly Y103 (⇨ SCH-6)
SP-RY (Y905)
To AF assembly Y905 (⇨ SCH-2)
To DISPLAY assembly Y101 (⇨ SCH-6)
SURR (Y101)
To AF assembly Y904 (⇨ SCH-2)
B IN (Y904)
To AF assembly Y901 (⇨ SCH-2)
A OUT (Y901)
To DISPLAY assembly Y102 (⇨ SCH-6)
+5V (Y102)
To DISPLAY assembly Y104 (⇨ SCH-6)
GND (Y104)
To AF assembly Y902 (⇨ SCH-2)
B OUT (Y902)
IC1
TC74HC74AP
XDC124ES-T
XDC143ES-T
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
Q1
Q2
Q3
Q4
Q5
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
C1
C2
C3
C4
C5
B1
D1-14: HSS104-02

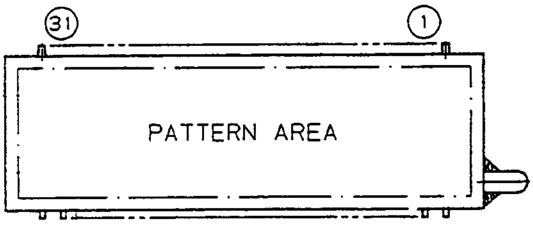
AAV1166 (V3901 : DISPLAY ASSEMBLY)

FL Tube

- Grid Assignment


8G
7G
6G
5G
4G
3G
2G
1G
60
150
400
1k
2.4k
6k
15k
GEQ
PRESET
S1
A B C D E
PROGRAM
S2


(8G~2G)
B9
B8
B7
B6
B5
B4
B3
B2
B1


31
1
PATTERN AREA

- Pin Connection

PIN NO.	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F2	F2	NP	NC	8G	7G	6G	5G	4G	3G	2G	1G	NC	NC	NC	NC	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	NC	NC	NP	F1	F1

NOTE
1) F1,F2 --- Filament
2) NP ------ No pin
3) NC ------ No connection
4) 1G~8G --- Grid
5) DL ------ Datum Line

- Anode Connection

	8G	7G	6G	5G	4G	3G	2G	1G
P1	60	150	400	1k	2.4k	6k	15k	S2
P2	B1	B1	B1	B1	B1	B1	B1	PROGRAM
P3	B2	B2	B2	B2	B2	B2	B2	A
P4	B3	B3	B3	B3	B3	B3	B3	B
P5	B4	B4	B4	B4	B4	B4	B4	C
P6	B5	B5	B5	B5	B5	B5	B5	D
P7	B6	B6	B6	B6	B6	B6	B6	E
P8	B7	B7	B7	B7	B7	B7	B7	S1
P9	B8	B8	B8	B8	B8	B8	B8	PRESET
P10	B9	B9	B9	B9	B9	B9	B9	GEQ

3. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10^1 → 561 ························ RD1/8PM $\boxed{5}\boxed{6}\boxed{1}$ J
47kΩ → 47 × 10^3 → 473 ························ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J
0.5Ω → 0R5 ··· RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
1Ω → 010 ··· RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10^1 → 5621 ·············· RM1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

LIST OF ASSEMBLIES

Mark	No. Description	Parts No.
	AF ASSEMBLY (for DC−J210)	AWZ4650
	AF ASSEMBLY (for DC−J110)	AWZ4647
	VOLUME ASSEMBLY	AWZ4653
	DISPLAY ASSEMBLY	AWZ4657
NSP	MIC ASSEMBLY	AWZ4663
	HEADPHONE ASSEMBLY	AWZ4666
NSP	TRANS CONNECT ASSEMBLY	AWZ4672
	SUB TRANS ASSEMBLY	AWZ4680
	TAPE ASSEMBLY	AWV1318
	SW ASSEMBLY	AWK1746

AF ASSEMBLY

SEMICONDUCTORS

Mark	No. Description	Parts No.
	IC1010, IC1202	ICP−N10
	IC3101, IC3102	LA3607
	IC3103	LC7522
	IC1902	M51951BSL
	IC2101, IC3301	MC14052BF
	IC2102	MC14066BF
	IC1001, IC1002	MC7812CT
	IC1003	NJM78M05FAS
	IC1006	NJM7912FA
	IC1005	NJM79M05FA
	IC1901	PD5214A
	IC1201 (for DC−J210)	STK4170−2G
	IC1201 (for DC−J110)	STK4150−2G
	IC2103, IC2301, IC2501, IC3302, IC3303	XRA4558F−P
	Q1004, Q1253, Q1261	2SA1048
	Q1002	2SA1515
	Q1252, Q1254, Q1262, Q1271, Q1272, Q2201, Q2202	2SC2458
	Q2102, Q2103, Q2203	XDA143ES
	Q1003	XDC124ES
	Q2101	XDC143ES
	D1201	D3SBA20 (A)
	D1001, D1002, D1005, D1256, D1258−D1261, D1901−D1903	HSS104−02
	D1161	RD5.1ESB2
	D1904−D1912	RD5.6ESB
	D1003, D1004, D1257	S5566

RELAIES

Mark	No. Description	Parts No.
	RY1001, RY1251	ASR1035

COILS

Mark	No. Description	Parts No.
	L1201, L1202	ATH−133
	L1901	LAU221K

CAPACITORS

Mark	No. Description	Parts No.
	C1003 (2200/42)	ACH1109
	C1201, C1202 (5600/50)(for DC−J210)	ACH1145
	C1201, C1202 (2200/42)(for DC−J110)	ACH1109
	C2305, C2306	CCSQCH101J50
	C3307	CCSQCH102J50
	C3129, C3130	CCSQCH221J50
	C3125, C3126, C3305, C3306	CCSQCH681J50
	C3140, C3141	CCSQSL101J50
	C1204	CEANP100M100
	C1252, C1904	CEAS010M50
	C1261, C2103, C2104	CEAS100M50
	C3135, C3136	CEAS101M10
	C1903	CEAS101M16
	C1209−1212	CEAS101M50
	C1004	CEAS102M35
	C1005, C1006, C1011, C1205, C1206, C3311, C3312	CEAS220M25
	C1271	CEAS221M16
	C2309, C2310, C2315, C2316, C3131−C3134, C3301, C3302	CEAS2R2M50
	C2317, C2318	CEAS330M25
	C3113, C3114, C3119, C3120	CEASR15M50
	C3117, C3118	CEASR47M50
	C1007, C1008	CEHAQ220M16
	C1901, C1902, C1910	CKCYF473Z50

Mark	No.	Description	Parts No.
	C3109, C3110, C3115, C3116		CKCYX683M25
	C1207, C1208		CKPUYX182M16
	C1905−C1909		CKSQYB102K50
	C2311, C2312		CKSQYB152K50
	C3121, C3122, C3127, C3128		CKSQYB182K50
	C3105, C3106, C3111, C3112		CKSQYB273K50
	C3103, C3104, C3123, C3124		CKSQYB472K50
	C2313, C2314		CKSQYB562K50
	C3101, C3102, C3107, C3108		CKSQYF103Z50
	C3137, C3138, C3142		CKSQYF473Z50
	C1215−C1218		CQMA473J50

RESISTORS

Mark	No.	Description	Parts No.
	R1007−R1010		RD1/2PMFL100J
	R1254		RD1/4PM153J
	R1256		RD1/4PM243J
	R1015		RD1/4PM331J
	R1213, R1214		RD1/4PM4R7J
	R1211, R1212		RD1/4PM561J
	R1207, R1208		RD1/4PM563J
	R2317, R2318		RD1/4PM820J
	R1215, R1216		RD1/4PMFL100J
	R1209, R1210		RD1/4PMFL101J
	R3651, R3652		RS1/10S000J
	R2313, R2314		RS1/10S101J
	R2303, R2304, R3315−R3318		RS1/10S102J
	R1927, R2113−R2117, R2213, R2214, R3105, R3106, R3130, R3131		RS1/10S103J
	R2108, R2315, R2316, R3301, R3302, R3503, R3504		RS1/10S104J
	R3111−R3126		RS1/10S105J
	R2311, R2312		RS1/10S122J
	R2101, R2102, R3103, R3104		RS1/10S123J
	R2103, R2104		RS1/10S133J
	R3307−R3312		RS1/10S152J
	R2507, R2508		RS1/10S153J
	R2215, R2216		RS1/10S203J
	R2201, R2202, R2301, R2302		RS1/10S221J
	R1904−R1908		RS1/10S222J
	R2105, R2106		RS1/10S332J
	R3305, R3306		RS1/10S333J
	R2501, R2502		RS1/10S392J
	R2109, R2110, R3511, R3512		RS1/10S472J
	R2107, R2305−R2308, R3101, R3102		RS1/10S473J
	R2309, R2310		RS1/10S474J
	R1918, R1919		RS1/10S563J
	R2503, R2504, R2506		RS1/10S682J
	R3109, R3110		RS1/10S823J
	R1261, R1262		RS2LMFR22J
		Other Resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
	X1901	(8.00MHz)	ASS1015
	CN403	9P SOCKET	AKP1072
	CN112	40P SOCKET	AKP1085
	CN105	36P SOCKET	AKP1105
	CN401	4P JUMPER CONNECTOR	KPE4
	CN106	7P JUMPER CONNECTOR	KPE7
		6P PIN JACK	AKB1121
		2P PIN JACK	AKB1146
		4P SPEAKER TERMINAL	AKE1012
		MINI JACK	AKN−203
		14P SOCKET	AKP1048
		SCREW	BBZ30P080FZK

VOLUME ASSEMBLY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC1502		TA7291S
	IC1501		XRA4558−P
	Q1501, Q1502		2SC2878
	Q1503		XDA124ES

CAPACITORS

Mark	No.	Description	Parts No.
	C1507, C1508		CEAS101M16
	C1501−C1504		CEAS220M25
	C1505, C1506		CEAS470M25
	C1511		CKDYX104M25
	C1509, C1510		CKPUYF473Z16

RESISTORS

Mark	No.	Description	Parts No.
	VR1501	(100k−4B×2)	ACX1053
	R1511, R1512		RD1/4PM820J
		Other Resistors	RD1/8PM□□□J

DISPLAY ASSEMBLY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC3702		BA3826S
	IC3901		PDC009A
	IC1701, IC1702		SN74LS05N
	Q3701		2SC2458
	Q3901, Q3902		XDC124ES
	Q1701, Q1702		XDC143ES
	D1701−D1704, D1707, D1716		AEL1064
	D1705, D1706, D1709−D1713, D1715		AEL1065
	D1708, D1714, D1801−D1806, D3702−D3705, D3801−D3806, D3901−D3907		HSS104−02

SWITCHES

Mark	No.	Description	Parts No.
	S1801, S1802, S1804−S1816, S1818−S1820, S3801, S3802, S3806−S3811, S3813−S3817		ASG1034
	S1901		ASH1012

Mark	No.	Description	Parts No.
COIL			
	L3901		LAU221K
CAPACITORS			
	C3901		ACH1135
	C1901		CCCSL100D50
	C3907		CEAS100M50
	C3904, C3908		CEAS470M10
	C3701, C3702		CEJA2R2M50
	C3906		CKCYB102K50
	C3703, C3905		CKPUYB102K50
	C3902, C3903		CKPUYF223Z25
RESISTORS			
	R3710, R3719		RD1/2PM2R2J
		Other Resistors	RD1/8PM□□□J
OTHERS			
	X3901	(12MHz)	ASS1062
	CN1901	40P SOCKET	AKP1085
	V3901	FL TUBE	AAV1166
		REMOTE CONTROL SENSOR UNIT	AXX1023
MIC ASSEMBLY			
SEMICONDUCTORS			
	IC2502		XRA4558−P
CAPACITORS			
	C2510		CEAS010M50
	C2502, C2511		CEAS100M50
	C2512, C2513		CEAS470M25
	C2509		CEJA100M50
	C2501		CKPUYX332M16
RESISTORS			
	VR2501	(10k−B)	ACS1087
		Other Resistors	RD1/8PM□□□J
OTHERS			
		MIC JACK	AKN1010
HEADPHONE ASSEMBLY			
SEMICONDUCTORS			
	IC1231		M5216P
	Q1231, Q1232		2SC2458
	Q1233		XDA124ES

Mark	No.	Description	Parts No.
CAPACITORS			
	C1235, C1236		CEAS220M25
	C1231, C1232		CEAS2R2M50
	C1241, C1242		CEAS330M25
	C1233, C1234		CEAS470M25
	C1237, C1238		CKPUYB101K50
	C1239, C1240		CKPUYB151K50
RESISTORS			
	R1243, R1244		RS1LMF820J
		Other Resistors	RD1/8PM□□□J
OTHERS			
		HEADPHONE JACK	AKN1010
TRANS CONNECT ASSEMBLY			
CAPACITORS			
	C1158, C1159		CQMXA104J100
SUB TRANS ASSEMBLY			
SEMICONDUCTORS			
	IC1015		ICP−N10
	IC1013, IC1014		ICP−N75
	IC1152		NJM78M12FAS
	IC1151		NJM78M56FAS
	Q1151, Q1153		2SB560
	Q1152		2SC2458
	D1154, D1156, D1159		HSS104−02
	D1160		RD10ESB
	D1151		RD15ESB
	D1155		RD36ESB2
	D1005−D1009, D1152, D1153, D1157, D1158		S5566
RELAY			
	RY1151		ASR1027
COILS & TRANSFORMERS			
	L1101		ATF−151
	T1151		ATT1219
CAPACITORS			
	C1101	(0.01/400)	ACG1003
	C1152, C1157		CEAS220M50
	C1153		CEAS221M100
	C1156		CEAS222M25
	C1151, C1154		CEAS470M16
	C1155		CEAS470M25

Mark	No.	Description	Parts No.
RESISTORS			
	R1152		RD1/4PM273J
	R1155, R1156		RD1/4PM470J
		Other Resistors	RD1/8PM☐☐☐J
OTHERS			
	CN	1P AC INLET	AKP1121
TAPE ASSEMBLY			
SEMICONDUCTORS			
	IC4421		CXA1100P
	IC4202		MC14066BF
	IC4302		SN74LS05N
	IC4121, IC4151		UPC4570G2
	IC4201, IC4251, IC4301		XRA4558F−P
	Q4352, Q4904, Q4906, Q4908, Q4910		2SA1515
	Q4201−Q4204, Q4355, Q4451−Q4454		2SC2458
	Q4205, Q4206, Q4461, Q4462		2SC2878
	Q4353, Q4354		2SC3377
	Q4321, Q4322		2SK373
	Q4901, Q4903		RN2204
	Q4207, Q4421, Q4460		XDA124ES
	Q4208		XDA143ES
	Q4902, Q4905, Q4907, Q4909, Q4911		XDC124ES
	Q4209, Q4301, Q4351		XDC143ES
	D4251, D4252, D4321−D4326, D4451, D4452, D4901−D4912		HSS104−02
COILS & TRANSFORMER			
	F4401, F4402		ATF1064
	T4351		ATX−043
	L4301, L4302		LTA392J
	L4303, L4304		LTA822J
CAPACITORS			
	C4362	(2000p/630)	ACE1020
	C4333, C4334		CCCSL100D50
	C4354		CCCSL221J50
	C4319, C4320		CCDSL271K500
	C4123, C4124		CCSQCH331J50
	C4252		CCSQCH560J50
	C4151, C4152		CCSQCH561J50
	C4253, C4303, C4304, C4403, C4404, C4453, C4454		CEAS010M50
	C4254		CEAS0R1M50
	C4213, C4214, C4358, C4363, C4405, C4406, C4409, C4410		CEAS100M50
	C4133, C4134, C4161, C4162, C4402		CEAS101M10
	C4455, C4456		CEAS220M16
	C4321, C4322		CEAS2R2M50
	C4309, C4310		CEAS330M16

Mark	No.	Description	Parts No.
	C4353		CEAS3R3M50
	C4131, C4132, C4159, C4160		CEAS470M10
	C4325, C4326, C4361		CEAS470M16
	C4129, C4130, C4157, C4158		CEAS4R7M50
	C4407, C4408		CEASR22M50
	C4902		CEASR33M50
	C4307, C4308		CFTXA823J50
	C4323, C4324, C4356		CKCYB681K50
	C4352, C4360		CKCYF103Z50
	C4211, C4212		CKSQYB152K50
	C4311, C4312		CKSQYB223K50
	C4305, C4306		CKSQYB272K50
	C4251		CKSQYB473K50
	C4315, C4316		CKSQYB562K50
	C4357		CQMA123K250
	C4355		CQMA153J50
	C4209, C4210		CQMA183J50
	C4127, C4128, C4155, C4156		CQMA223J50
	C4207, C4208		CQMA273J50
	C4317, C4318		CQMA333J50
	C4351		CQMA562K400
	C4313, C4314		CQMA822J50
RESISTORS			
	VR4903		VRTP6HS103
	VR4121, VR4122, VR4151, VR4152, VR4451, VR4452		VRTP6HS202
	VR4901, VR4902		VRTP6HS203
	VR4351, VR4352		VRTP6HS204
	R4449		RS1/10S000J
	R4129, R4130, R4157, R4158		RS1/10S101J
	R4315, Q4316, R4461, R4462		RS1/10S102J
	R4201, R4202, R4409, R4416−R4418, R4420, R4422		RS1/10S103J
	R4307, R4308, R4419		RS1/10S104J
	R4205, R4206, R4209, R4210, R4459		RS1/10S105J
	R4203, R4204		RS1/10S122J
	R4257, R4421		RS1/10S123J
	R4127, R4128, R4155, R4156		RS1/10S124J
	R4123, R4124, R4151, R4152, R4219, R4220, R4252		RS1/10S154J
	R4253		RS1/10S181J
	R4222, R4321, R4322, R4413, R4414, R4458		RS1/10S222J
	R4254, R4259		RS1/10S223J
	R4251		RS1/10S224J
	R4401, R4402		RS1/10S242J
	R4407, R4408, R4411, R4412		RS1/10S273J
	R4319, R4320		RS1/10S302J
	R4207, R4208		RS1/10S332J
	R4311, R4312		RS1/10S333J
	R4403, R4404		RS1/10S362J
	R4313, R4314		RS1/10S393J
	R4427		RS1/10S433J
	R4323, R4324, R4455, R4456		RS1/10S471J

Mark	No. Description	Parts No.
	R4213−R4216, R4231, R4450	RS1/10S472J
	R4218, R4230, R4256, R4258	RS1/10S473J
	R4255	RS1/10S514J
	R4125, R4126, R4153, R4154	RS1/10S622J
	R4325, R4326	RS1/10S681J
	R4405, R4406, R4463, R4464	RS1/10S682J
	R4309, R4310	RS1/10S683J
	R4317, R4318	RS1/10S820J
	Other Resistors	RD1/8PM□□□J
OTHERS		
	CN 36P SOCKET	AKP1105

SW ASSEMBLY

SEMICONDUCTORS		
	IC1	TC74HC74AP
	Q1−Q3, Q6, Q7	XDC124ES
	Q4, Q5	XDC143ES
	D1−D14	HSS104−02
CAPACITORS		
	C4	CCCSL101J50
	C5	CEANP100M35
	C2, C3	CEASR15M50
	C6	CEAS101M10
	C1	CEAS220M25
RESISTORS		
	R13	RD1/4PM390J
	Other Resistors	RD1/8PM□□□J

4. ADJUSTMENTS

4.1 ADJUSTMENT OF MECHANICAL SECTION

- The adjustment location and the measuring location, refer to Fig. 4−4.
- Set the function switch to "TAPE".
- Test tape : STD−301 (3kHz 30min)

1. Adjustment of tape speed

No.	Mode	Input signal & Test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1	PLAY	Playback the STD-301 tape to 3kHz.	Deck I	TAPE assembly VR4901	JP-L (Lch)	Press the PLAY button and adjust the frequency to 3010Hz ±10Hz. Make sure that the wow and flutter is 3010Hz ±55Hz.	
2	PLAY (Double speed mode)			—		Press the PLAY button in double speed mode and confirm that the frequency is 6000Hz ±1000Hz. Note down the figure.	Release the double speed mode after adjustment.
3	PLAY (Double speed mode)		Deck II	TAPE assembly VR4903	JP-L (Lch)	Press the PLAY button in double speed mode and adjust the frequency to be within ±30Hz of the figure recorded at step No. 2.	Release the double speed mode after adjustment.
4	PLAY			TAPE assembly VR4902		Press the PLAY button and adjust the frequency to 3010Hz ±10Hz. Make sure that the wow and flutter is 3010Hz ±55Hz.	

Double-speed mode : The double-speed mode can be entered by short circuiting the line between TP4901 and TP4902.
The mode is canceled by opening the short circuited line and switching the power to OFF.

4.2 ADJUSTMENT OF ELECTRICAL SECTION

■ Check and conduct the following before adjusting the electric section.

1. Adjustment of tape speed has been completed.
2. Clean and demagnetize the head using a head eraser.
3. When measured, the level should be 0dBV = 1Vrms.
4. Use side A of the specified tape for adjustment.
   STD−331E : For adjustment of playback system.
   STD−631 : NORMAL blank tape
5. Prepare the following measuring devices :
   - AC millivoltmeter
   - Low-frequency oscillator
   - Attenuator
   - Oscilloscope
6. Adjust both L and R channels, unless specified otherwise.
7. Set the DOLBY NR switches to OFF, unless specified otherwise.
8. Warm up the unit for several minutes before adjustment. Especially before adjusting the frequency characteristics of recording and playback, warm up for 3 to 5 minutes in REC/PLAY mode.
9. Make sure to follow the proper order of the adjustment procedure. Any change in the order may cause an improper result.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ꟹ are trademarks of Dolby Laboratories Licensing Corporation.

■ List of Adjustment

Deck I

1. Head azimuth adjustment
2. Playback level adjustment

Deck II

1. Head azimuth adjustment
2. Playback level adjustment
3. Bias oscillation frequency adjustment
4. Recording level adjustment
5. Adjustment of frequency characteristics of recording/playback

**As the reference recording level is 250nwb/m for STD−331E, the recording level will be higher by 4 dB for STD−331B (160nwb/m). When adjusting, pay carefull attention to the type of tape used.*

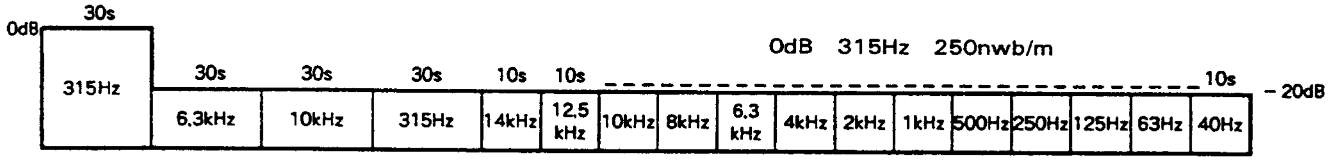
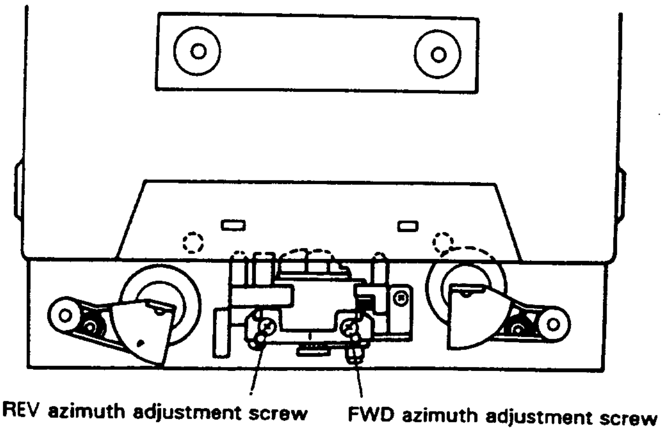

0dB
30s
315Hz
0dB 315Hz 250nwb/m
30s
6.3kHz
30s
10kHz
30s
315Hz
10s
14kHz
10s
12.5 kHz
10kHz
8kHz
6.3 kHz
4kHz
2kHz
1kHz
500Hz
250Hz
125Hz
63Hz
10s
40Hz
−20dB

Fig. 4−1 Test Tape STD−331E


REV azimuth adjustment screw
FWD azimuth adjustment screw

NOTE : Before adjusting, remove the deck panel.

Fig. 4−2 Head Azimuth Adjustment

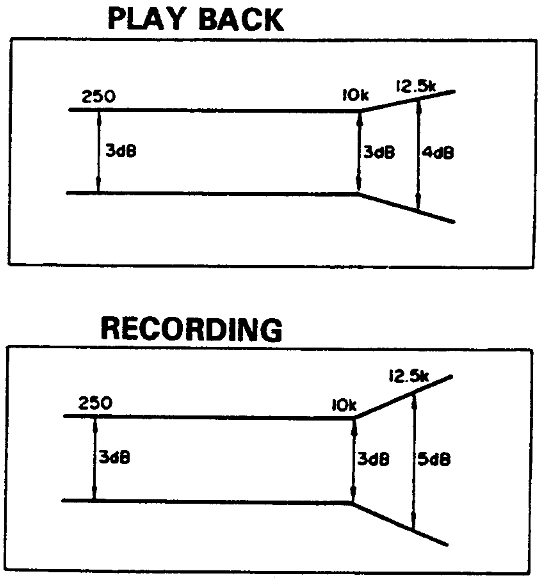


Fig. 4−3 Frequency Characteristics

■ Head Adjustment of Deck I

- Deck I is provided with an automatic tape selector mechanism.
- Note : Do not switch over FWD and REV while the screw driver is inserted.

1. Head Azimuth Adjustment

Procedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD−331E (10kHz, −20dB).	Head azimuth adjustment screw (Fig. 4−2)	TAPE assembly JP−L (Lch) JP−R (Rch)	Maximum playback signal level.	Lock the screw with screw lock after completing adjustment.

2. Playback Level Adjustment

- Be sure to make a careful adjustment, as the adjustment determines the DOLBY NR level for playback.

Procedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD−331E (315Hz, 0dB).	TAPE assembly VR4151 (Lch) VR4152 (Rch)	TAPE assembly JP−L (Lch) JP−R (Rch)	−6.3dBV	

Head Adjustment of Deck II

- Deck II is provided with an automatic tape selector mechanism.
- Note : Do not switch over FWD and REV while the screw driver is inserted.

1. Head Azimuth Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD−331E (10kHz, −20dB).	Head azimuth adjustment screw (Fig. 4−2)	TAPE assembly JP-L (Lch) JP-R (Rch)	Maximum playback signal level.	Lock the screw with screw lock after completing adjustment.

2. Playback Level Adjustment

- Be sure to make a careful adjustment, as the adjustment determines the DOLBY NR level for playback.

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD−331E (315Hz, 0dB).	TAPE assembly VR4121 (Lch) VR4122 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	−6.3dBV	

3. Bias Oscillation Frequency Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Load the test tape STD−631 and set to record mode.	TAPE assembly T4351	Area between Ⓐ and Ⓑ (TAPE assembly) shown in Fig. 4−4.	The oscillation frequency is 105kHz ±5kHz.	

4. Recording Level Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Apply a signal of 315Hz to the VCR input terminal and set the function to "VCR".	Input signal level	TAPE assembly JP-L (Lch) JP-R (Rch)	−10.3dBV	
2	NORM	REC/ PLAY	Record and playback the test tape STD-631 (315Hz).	TAPE assembly VR4451 (Lch) VR4452 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	Repeat the recording/playback, and make adjustment so that the playback level of 315Hz is −10.3dBV.	

5. Adjustment of Frequency Characteristics of Recording/playback

- As this procedure is for adjustment of the recording bias, be careful not to increase the distortion by underadjusting the bias.

Procedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Apply a signal of 315Hz to the VCR input terminal and set the function to "VCR".	Input signal level	TAPE assembly JP-L (Lch) JP-R (Rch)	−30.3dBV	
2	NORM	REC/ PLAY	Record and playback the test tape STD-631 (315Hz and 10kHz).	TAPE assembly VR4351 (Lch) VR4352 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	Repeat the recording/playback, and make adjustment so that the playback level of 10kHz remains 0 ±0.5dB in relation to 315Hz.	

TAPE assembly

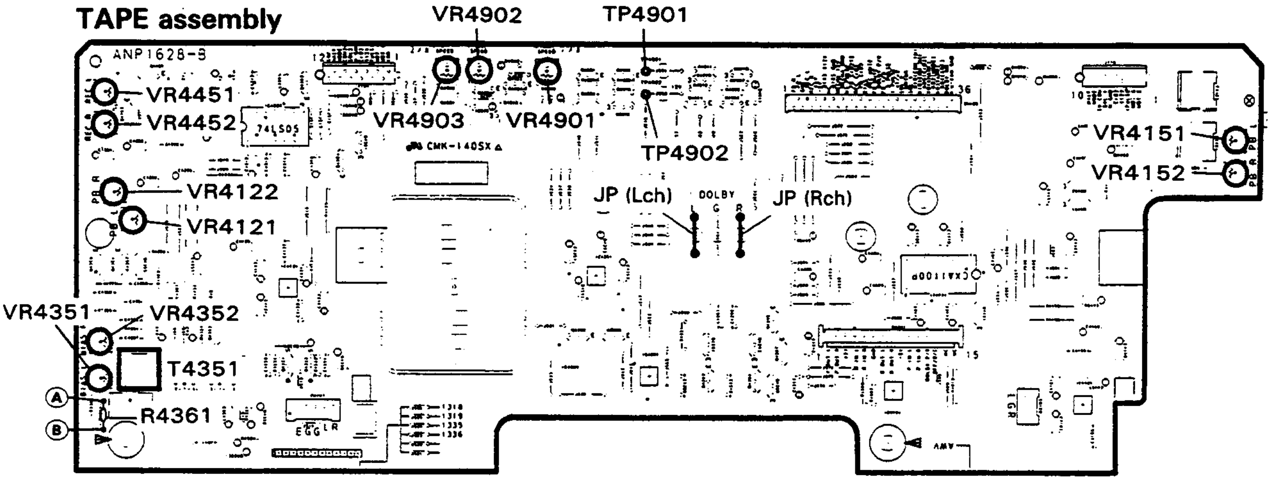
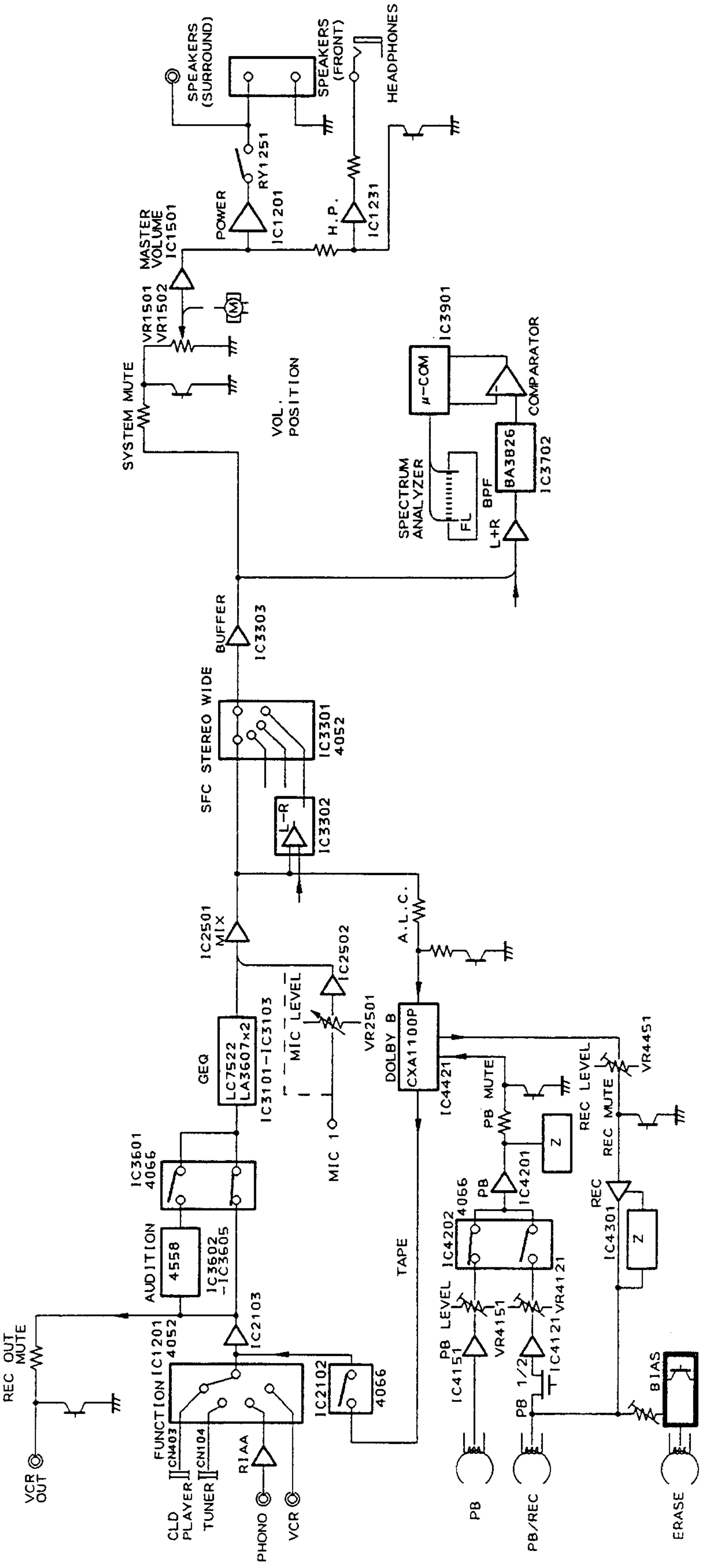

VR4902
TP4901
ANP1628-B
VR4451
VR4452
74LS05
VR4903
VR4901
CMK-140SX
TP4902
VR4151
VR4152
VR4122
VR4121
JP (Lch)
DOLBY
JP (Rch)
VR4351
VR4352
T4351
A
B
R4361

Fig. 4-4 Adjustment Points

5. BLOCK DIAGRAM


SPEAKERS (SURROUND)
SPEAKERS (FRONT)
HEADPHONES
RY1251
POWER
IC1201
H.P.
IC1231
MASTER VOLUME
IC1501
VR1501
VR1502
M
SYSTEM MUTE
VOL. POSITION
μ-COM
IC3901
COMPARATOR
BA3826
IC3702
BPF
SPECTRUM ANALYZER
FL
L+R
BUFFER
IC3303
SFC STEREO WIDE
IC3301
4052
L-R
IC3302
IC2501
MIX
A.L.C.
IC2502
MIC LEVEL
VR2501
GEQ
LC7522
LA3607×2
IC3101-IC3103
MIC 1
DOLBY B
CXA1100P
IC4421
PB MUTE
Z
REC LEVEL
VR4451
REC MUTE
REC
IC4301
Z
IC3601
4066
AUDITION
4558
IC3602
-IC3605
IC4202
4066
PB
IC4201
TAPE
IC2103
IC1201
4052
FUNCTION
REC OUT MUTE
IC2102
4066
PB LEVEL
VR4151
IC4151
VR4121
IC4121
PB 1/2
BIAS
VCR OUT
CN403
CN104
CLD PLAYER
TUNER
RIAA
PHONO
VCR
PB
PB/REC
ERASE

6. FOR DC-J210/YPW, DC-J110/SD, SL AND YPW TYPES

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

CONTRAST OF MISCELLANEOUS PARTS

DC-J210/YPW, DC-J110/SD, SL, YPW and DC-J210/SD have the same construction except for the following :

Mark	Symbol & Description	Part No.					Remarks
		DC-J210/ SD	DC-J210/ YPW	DC-J110/ SD	DC-J110/ SL	DC-J110/ YPW	
	AF assembly	AWZ4650	AWZ4650	AWZ4647	AWZ4647	AWZ4647	
	SUB TRANS assembly	AWZ4680	AWZ4682	AWZ4680	AWZ4680	AWZ4682	*1
⚠	S1 Voltage selector (AC110V/120-127V/220V/240V)	AKX-507	....	AKX-507	AKX-507	....	
⚠	S Voltage selector (AC110-127V/220V-240V)	AKX1004	....	AKX1004	AKX1004	....	
⚠	T102 Power transformer	ATS1468	ATS1468	ATS1470	ATS1470	ATS1470	
⚠	FU1101 Fuse (T2.5A/250V)	AEK-512	....	AEK-512	AEK-512	....	
⚠	FU1102 Fuse (T1.6A/250V)	AEK-510	AEK-510	....	....	....	
⚠	FU1102 Fuse (T800mA/250V)	....	....	AEK-507	AEK-507	AEK-507	
⚠	FU1103 Fuse (T1.6A/250V)	AEK-510	....	....	....	....	
⚠	FU1103 Fuse (T800mA/250V)	....	....	AEK-507	AEK-507	....	
⚠	AC Power cord	ADG1129	ADG1124	ADG1129	ADG1127	ADG1124	
	Rear panel	ANC2005	ANC2006	ANC2005	ANC2083	ANC2006	
	Front panel	AMB2092	AMB2092	AMB2095	AMB2095	AMB2095	
	Heat sink	ANH1425	ANH1425	ANH1408	ANH1408	ANH1408	
	Packing case	AHD2502	AHD2502	AHD2503	AHD2503	AHD2503	

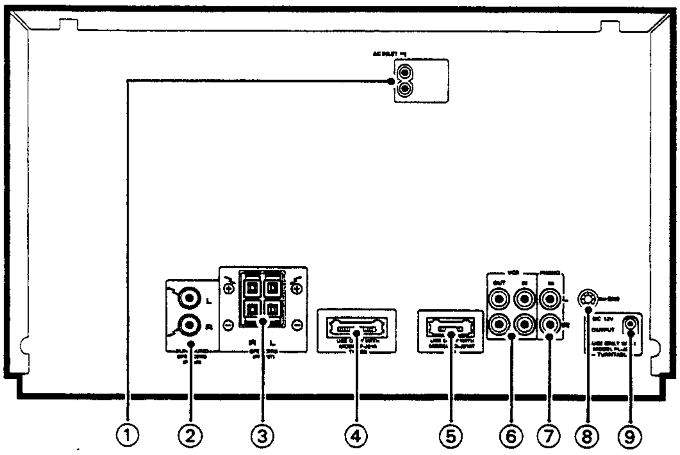
**1 : Although AWZ4682 and AWZ4680 are different in part number, they have the same service parts.*

AF ASSEMBLY

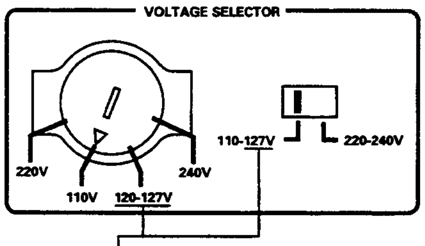
AWZ4647 and AWZ4650 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4650	AWZ4647	
	IC1201	STK4170-2G	STK4150-2G	
	C1201, C1202 (5600/50)	ACH1145	....	
	C1201, C1202 (2200/42)	....	ACH1109	

7. PANEL FACILITIES



SD, SL types


VOLTAGE SELECTOR
220V
110V
120-127V
240V
110-127V
220-240V

These voltage indications show 120V only with Singapore model.

(YPW type)

Double Deck Amplifier: DC-J210/DC-J110

① **AC INLET jack**
Connect the power cord here.

② **SURROUND SPEAKERS jacks**
Connect the surround speaker systems.

NOTE:
Connect a speaker system having a nominal impedance of 16 Ω or more.

③ **SPEAKERS terminals**
L: Connect the left speaker systems as seen from the listening position.
R: Connect the right speaker system as seen from the listening position.

NOTE:
Connect a speaker system having a nominal impedance ranging from 6 Ω to 16 Ω.

④ **TUNER jacks**
Connect the tuner flat cable here.

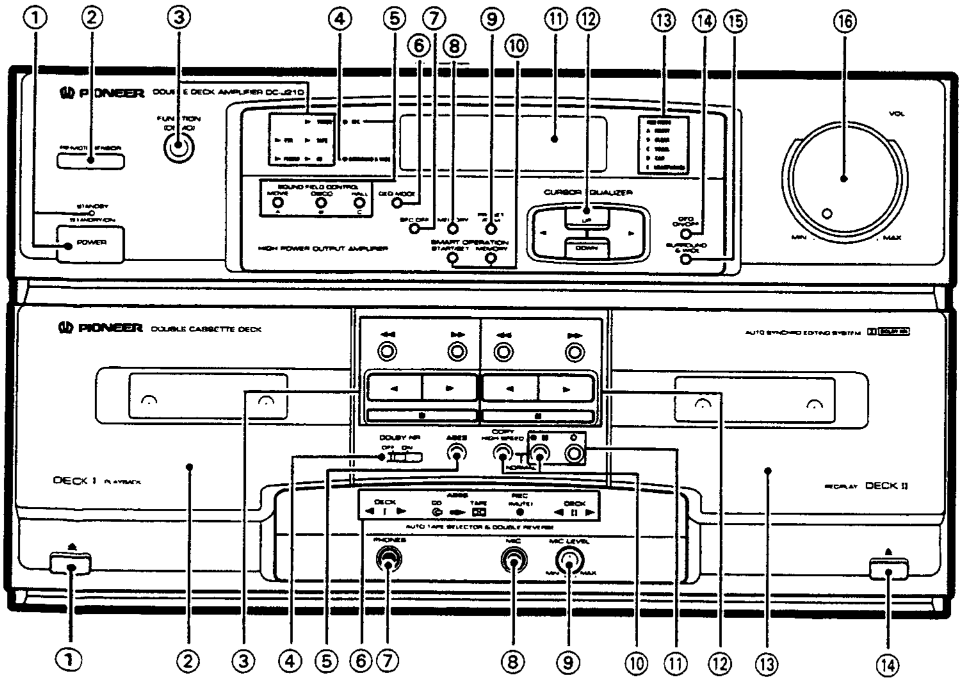
⑤ **CD jacks**
Connect to a compact disc player PD-J210T or PD-J215M flat cable.

⑥ **VCR IN/OUT jacks**
IN : Connect to audio output jacks of VCR.
OUT: Connect to audio input jacks of VCR.

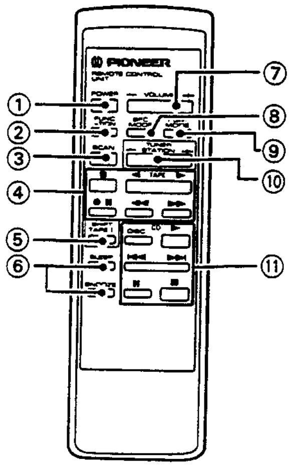
⑦ **PHONO input jacks**
Connect the audio cord of the turntable to these jacks.

⑧ **Ground terminal (GND)**
Connect the ground cord of the turntable here (except for PL-J210).

⑨ **TURNTABLE (DC 12V OUTPUT) jack**
This jack supplies power to the turntable PL-J210.
Connect the power supply cord of the turntable to this jack.


①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
PIONEER
POWER
VOL
MIN
MAX
PIONEER DOUBLE CASSETTE DECK
DECK I
DECK II
PHONES
MIC
MIC LEVEL
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭

DC-J210/DC-J110
(The illustration of the double deck amplifier shows the Model DC-J210.)


PIONEER
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪

Double Deck Amplifier: DC-J210/DC-J110

- This unit has an automatic tape type selector.
- Tapes can be played back on deck I; tapes can be played back and recorded on deck II.
- Sound can be recorded as adjusted by the graphic equalizer.
- Use a TYPE I (normal) or TYPE II (HIGH/CrO₂) tape.

■ Amplifier section

① POWER STANDBY/ON switch/STANDBY indicator

This is the switch for electric power.

ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational.
A minute flow of power feeds the unit to maintain operation readiness.
When the STANDBY indicator is on, the unit is in STANDBY.

② REMOTE SENSOR window

③ FUNCTION (DEMO) button and indicators

Use to select the input source. Each time the button is pressed, the input source changes in the order:

→ CD → VCR → PHONO → TUNER → TAPE ┐

As each source is selected, the corresponding indicator lights.

④ SURROUND & WIDE indicator

This lights when SURROUND & WIDE is on.

⑤ SOUND FIELD CONTROL buttons and indicator (MOVIE/A, DISCO/B, HALL/C)

These buttons are used when selecting one of the preset sound fields (MOVIE, DISCO, HALL), or one of your own original memory settings (PROGRAM A, B, C). The SFC indicator lights when this setting is selected.

⑥ GEQ MODE button

Use to recall preset equalization settings. Also use to program into memory desired sound field settings.

⑦ SFC OFF button

Press to reset the sound field control to no effect. Then, the SURROUND and WIDE to off, and set the graphic equalizer to its flat setting.

⑧ MEMORY button

Use to memorize your desired sound field control settings.

⑨ PRESET/PGM (PROGRAM) button

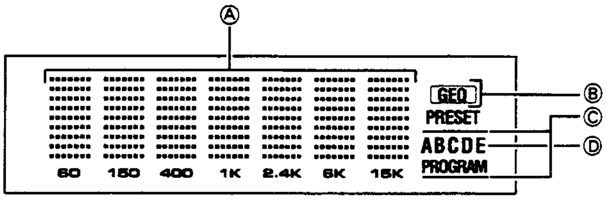
Use to switch between preset sound field control settings and your own personally created sound field setting.

⑩ SMART OPERATION buttons

START/SET: Use when programming memory and operating SMART OPERATION.

MEMORY : Use when programming SMART OPERATION into memory.

⑪ Display section



Ⓐ Visual display of spectrum analyzer and graphic equalizer.
Ⓑ This lights when the GEQ ON/OFF button is ON.
Ⓒ These underlines indicate the memory (PRESET or PROGRAM) that can be recalled with the PRESET/PGM or GEQ MODE button.
Ⓓ Display of the memory being recalled with the GEQ MODE button (A, B, C, D or E lights) or SOUND FIELD CONTROL buttons (A, B or C lights).

⑫ CURSOR EQUALIZER buttons

Use to adjust graphic equalizer settings.

◄, ► : Use these to change the frequency range to be adjusted.

UP, DOWN: Use these to adjust the degree of equalization.

⑬ Preset equalizer indicators

Lights when the desired preset equalizer is selected.

⑭ GEQ ON/OFF button

This switches the graphic equalizer ON/OFF. When it's ON, the GEQ indicator in the display section lights.

⑮ SURROUND & WIDE button

By turning this button ON, you can enjoy surround reproduction when rear speakers are used.
By turning this button ON, you can enjoy WIDE (stereo wide) reproduction with greater left-right spread when rear speakers are not used.
Each time the button is pressed the function changes in the following order:

→ WIDE 1 → WIDE 2 → WIDE 3 → off ┐

The sense of left-right breadth increases as the numbers increase from 1 to 3.

NOTE:
In the case of monaural source, SURROUND & WIDE effects cannot be obtained.

⑯ VOL. (Volume) control

■ Cassette deck section

① Deck I eject button (≜)

② Deck I cassette door

③ Deck I operation buttons

► (Play) : For playing back a tape in the forward mode.
◄ (Play) : For playing back a tape in the reverse mode.
■ (Stop) : For stopping the tape.
►► (Fast): Fast forward in forward mode, rewind in reverse mode. Music search (MS) starts if this is pressed during playback.
◄◄ (Fast): Rewind in forward mode, fast forward in reverse mode. Music search (MS) starts if this is pressed during playback.

④ DOLBY* NR switch

Set this switch to the ON position to activate the DOLBY NR system.

- Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on. Sound quality will be adversely affected if played back with the system off, or if tapes recorded using a different noise reduction system are played back with the Dolby NR system on.
- It is recommended that tapes recorded with Dolby B type NR be so marked on the label. This will help prevent incorrect setting of the noise reduction switch during playback.

*

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.*

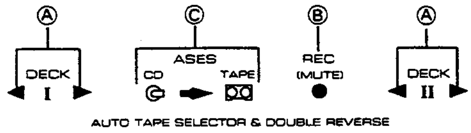
⑤ ASES button

Used for automatically recording a CD on cassette tape.

NOTE:

- *FINE is the mode when performing CD player EDIT (Computer Allocated Program Editing).*
- *The NORMAL mode provides a blank space of about five seconds between songs.*

⑥ Operation indicators



Ⓐ **Direction** (◄, ►): Indicates direction of tape travel during recording or playback. Flashes slowly in Pause mode. Flashes rapidly during Music Search (MS).
Ⓑ **REC (MUTE):** Lights when recording. It flashes during tape copying.
Ⓒ **ASES:** Lights during the A.S.E.S. mode.

⑦ PHONES (Headphones) jack

For stereo headphones.

NOTE:

There is no output from the speakers when headphones are plugged into PHONES jack.

⑧ MIC (Microphone) jack

This is a standard jack for connecting a microphone.

⑨ MIC LEVEL control

Used for adjusting the volume of microphone.

⑩ COPY buttons

Used for tape copying. To select normal speed, press the recording pause button (●II) followed by the HIGH SPEED button.

HIGH SPEED: Copying at about twice normal tape speed. (Copies can be made in about half the NORMAL time.)
NORMAL : Copying from the Deck I tape to the Deck II tape at normal recording/playback speed.

⑪ Deck II control buttons

● II (Rec pause): When pressed once, sets unit to recording pause mode. The REC indicator lights and the direction indicators (◄ and ►) flash. Recording begins when you press the play button (◄ or ►). When pressed while the tape is traveling, the unit will enter the pause mode.
O (Mute) : Used for creating a blank space between songs.

⑫ Deck II operation buttons

Same as Deck I operation buttons ③.

⑬ Deck II cassette door

⑭ Deck II eject button (≜)

Remote Control Unit

① POWER button

② FUNCTION button

Use to select the input source. Each time the button is pressed, the input source changes in the order:

→ CD → VCR → PHONO → TUNER → TAPE ─┐

As each source is selected, the corresponding indicator lights.

③ SCAN button

Use when you wish to scan the radio stations stored in the memory. Each station will be received for about five seconds before moving automatically to the next station.

④ TAPE II operation buttons

Same as Deck II operation buttons and Deck II control buttons on the cassette deck amplifier (except Mute).

⑤ SHIFT TAPE I button

To operate Deck I, press the desired deck operation while pressing this button.

⑥ Timer operation buttons

SLEEP : Sets the sleep timer.
SNOOZE : Turns off power if pressed after timer playback begins. Timer playback begins again approx. 5 minutes later.
The amplifier input selector automatically switches to the music source being operated when you press the CD playback (►), cassette deck playback (◄, ►), or tuner station controls.

⑦ VOLUME + (UP)/– (DOWN) buttons

When pressed, VOLUME on the amplifier is actually moved by a motor.

⑧ SFC MODE button

Use to select one of the preset sound fields. Each time the button is pressed, one of the preset sound fields will be selected, in the following order:

→ MOVIE → DISCO → HALL ─┐
└──── off* ←────┘

*Set SURROUND & WIDE to off, and set the graphic equalizer to its flat setting.

⑨ PGM (PROGRAM) MODE button

This button is used when selecting one of your own personally created sound fields. Each time the button is pressed, one of the sound fields will be selected, in the following order:

→ A → B → C ─┐
└── off* ←──┘

*Set SURROUND & WIDE to off, and set the graphic equalizer to its flat setting.

⑩ TUNER STATION – (DOWN)/ + (UP) buttons

- Used for locating Stations (see pages 15, 16).

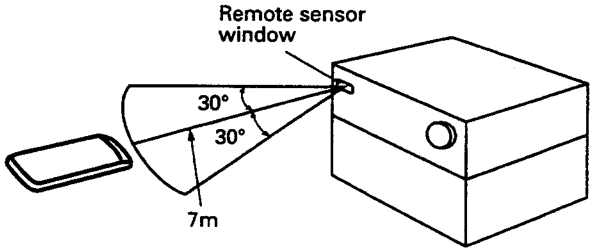
+ (UP) : Stations change in order in the upward direction
– (DOWN): Stations change in order in the downward direction.

⑪ CD operation buttons

Perform the connections so that the CD player is operated by the remote control unit.

► : Play
DISC : DISC selection
■ : Stop
II : Pause
I◄◄, ►►I : Track search

Range of remote control



When the remote control unit is pointed at the remote sensor window on the amplifier section and any of its buttons is pressed, the tuner and other components can be operated by remote control.
Distance: Within a range of approx. 7 meters (23 feet) from the remote sensor window.
Angle: Within approx. 30 degrees from the center of the remote sensor window.
Remote control will not be possible if there is an obstacle between the remote control unit itself and the remote sensor window.
Performance of the remote control unit is adversely affected by strong fluorescent light. Keep such lights away, especially from the sensor window.

8. SPECIFICATIONS

Double deck amplifier: DC-J210/DC-J110

Amplifier Section

[DC-J210]
Continuously Average Power Output is 50 Watts* per channel, min., at 8 ohms from 40 Herz to 20,000 Herz, with no more than 5% ** total harmonic distortion.
[DC-J110]
Continuously Average Power Output is 25 Watts* per channel, min., at 8 ohms from 40 Herz to 20,000 Herz, with no more than 5% ** total harmonic distortion.

- Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.

Music power (DIN)	
[DC-J210]	105 W+105 W (1kHz, T.H.D. 1%, 8Ω)
[DC-J110]	82 W+82 W (1kHz, T.H.D. 1%, 8Ω)
Graphic equalizer frequency band	60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz, ±7 dB
Total Harmonic Distortion	
[DC-J210]	No more than 0.2% (40 Hz to 20,000 Hz, 35 W, 8Ω)**
[DC-J110]	No more than 0.2% (40 Hz to 20,000 Hz, 22.5 W, 8Ω)**

Cassette Deck Section

Systems	4 track, 2-channel stereo
Heads	Recording/playback head x 1 Playback head x 1 Erasing head x 1
Motor	DC servo 2 speed motor x 2
Wow and Flutter	No more than 0.09% (W.PEAK)
Fast Winding Time	Approximately 105 seconds (C-60 tape)
Frequency Response (-20 dB recording):	
TYPE I (Normal) tape	35 Hz to 14,000 Hz ±6 dB
TYPE II (HIGH/CrO2) tape	35 Hz to 15,000 Hz ±6 dB
Signal-to-Noise ratio	
Dolby NR OFF	56 dB
Noise Reduction Effect	
Dolby B-type NR ON	More than 5 dB (at 5 kHz)

Furnished Parts

Operating Instructions	1
Remote Control Unit	1
Dry Cell Batteries ("AAA" (IEC R03/UM-4)	2
Power cord	1

Miscellaneous

Power requirements	
Australian model	AC 240 Volts-, 50/60 Hz
Singapore model	AC 110/120/220/240 V (switchable), 50/60 Hz
Other models	AC 110/120-127/220/240 V (switchable), 50/60 Hz
Power Consumption:	
[DC-J210]	400 W
[DC-J110]	275 W
Dimensions	360 (W) x 210 (H) x 344 (D) mm
Weight (without package)	
[DC-J210]	9.5 kg
[DC-J110]	8 kg

- *Specifications and design subject to possible modification without notice due to improvements.*

***Measured By Audio Spectrum Analyzer.*